THE IMPACT OF PERCEIVED INTERACTIVITY, INVOLVEMENT AND CONTROL ON BANK SATISFACTION AND LOYALTY

AN INTEGRATED eSERVICE MODEL FOR eBANKING

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ABSTRACT

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Control and involvement are well researched concepts in traditional marketing, while interactivity is a relatively new concept associated with Internet marketing and communication. From an Internet interaction perspective, the research examines the impact of interactivity, control and involvement on customer satisfaction and loyalty in an eBanking context. Using Flow Theory as the theoretical foundation, it is proposed that these three Internet communication constructs lead to eService dependency and eService encounter satisfaction, which, in turn, enhance the overall satisfaction and loyalty to the principal bank at corporate level.

A mixed methodology using both qualitative and quantitative approaches of data collection is adopted. In-depth interviews with eBankers and focus group studies with eBanking customers support the importance of interactivity, control and involvement in the eService encounter. The in-depth interviews and focus groups facilitate the identification of eService dependency as a new construct in the model. Participants' views also help the operationalisation of constructs and development of questionnaire for quantitative data collection.

Analysis of the quantitative data using structural equation modelling shows support for all three constructs' hypothesised positive relationships with eService dependency and eService encounter satisfaction i.e. satisfaction at the service encounter level. It is also confirmed that eService dependency and eService encounter satisfaction have a positive impact on overall satisfaction with the principal bank i.e. satisfaction at corporate level. However, the influence of eService dependency and eService encounter satisfaction on loyalty to principal bank is not supported.

The research concludes with the theoretical contributions and managerial implications of the research. Strategies to enhance interactivity with, control of and involvement by eBanking customers are recommended to eBankers. Limitations of the research and directions for future research in Internet and eService are also suggested.

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CHAPTER 1

INTRODUCTION

The Internet has changed and will continue to change the daily life of consumers. It is revolutionising and transforming the way people acquire information, communicate and conduct business activities.

The Internet is transforming the way business is conducted, but some of the most fundamental changes are occurring in the way people and businesses are connected with each other and the way they communicate. Communication is the core benefit offered by the Internet. The communication infrastructure and technologies enable the rapid processing and distribution of information and maintain a high degree of connectivity between people and companies. Although marketers have been quick to recognise the potential offered by the Internet as a new communication and service medium by setting up Internet sites, most of them cannot fully utilise its primary characteristics and benefits to build up advantage. To fully utilise the Internet, it is critical for both academics and practitioners to explore and understand its marketing and communication attributes for the best relationship outcome.

The focus of this thesis is the examination of the impact of certain important Internet communication attributes on the service outcome in an eService context. The

Internet communication attributes identified for study are interactivity, control and involvement. The positive service outcomes are satisfaction and loyalty.

The Internet as a Transaction Medium

The majority of banks in Hong Kong offering retail banking services have responded to the increasing potential of Internet technologies by implementing eBanking services. They believe that eBanking will be the major means of offering substantial benefits to customers.

As a result of the Internet's capacity to provide easy access to information and global reach, it offers numerous benefits to both providers and consumers of eBanking services. Besides cost reduction, eBanking services provide great flexibility, as they have the capacity to produce a large volume of business simultaneously on a 24-hour basis without intensive human resources input. eBanking services overcome physical barriers and offer global access by customers. From the customers' perspective, in addition to being able to benefit from the lower cost of transactions and instant access to account information, eBanking services offer more choices and greater transparency in pricing.

As the Internet and the eBanking platform are simply considered an instant transaction medium, eBanking's Internet communication attributes have been neglected by banking practitioners and customers. However, it is argued that these

attributes have positive effects on the most essential value of banking service: customer satisfaction.

The Internet as a Marketing and Communication Medium

The Internet offers a primary communication channel with customers (Hoffman, Novak and Chatterjee, 1996; Peterson, Balasubramanian and Bronnenberg, 1997; Evan and Wurster, 1999), a whole new way to establish relationships or direct linkages with customers (Sterne, 1996; Chou and Chou, 2000) and benefits that can help customers be more efficient and effective in their interactions with companies (McGaughey and Mason, 1998).

The Internet has made it possible for companies to focus on building relationships with individual customers and to make direct, intimate and personalised contact with each customer (Dutta and Segev, 1999; Prahalad and Krishnan, 1999; Walsh and Godfrey, 2000). The associated World Wide Web provides companies with a powerful means to interact with customers on a one-to-one basis (Hoffman et al., 1996; Versen, 1998; Wells, Fuerst and Choobineh, 1999). Thus, many organisations are leveraging the World Wide Web to create superior linkages with customers (Venkatraman and Henderson, 1998).

Recently, the use of eCommerce as a means of enacting transactions and relationships with customers has been increasing exponentially (Hoffman et al.,

1996; Davis et al., 1999). Because inherent opportunities of eCommerce for conducting business online are driving the development of a new customer relationship paradigm, development of new products and pursuit of low-cost self service strategies (Costello and Tuchen, 1998; Dunn and Varano, 1999), most organisations, large and small, are making major Internet- and eCommerce-related investments (Berthon, Hulbert and Pitt, 1999).

From the above literature-related discussion, it can be seen that the marketing and communcation benefits of the Internet are well recognised. However, there is no concrete idea regarding how the Internet contributes to positive or better service or relationship outcomes between customers and service providers. Also, there is no specific context in which to examine the contribution of the Internet to customer relationships and customer satisfaction.

In order to solve the problems of the existing literature and to study the impact of the Internet as a marketing and communication medium, eBanking services were selected for the current research as an example illustrating the application of the Internet to serve customers.

The following sections explain the research idea, the research gap and the objectives of the research; they also justify the significance and contribution of the research.

Generation of the Research Idea

The origin of the research idea comes from the researcher's personal observation of and curiosity about how the Internet has changed the scenario of the company-customer relationship in the service business.

In recent years, intense competition has caused service businesses to concentrate on customer relationship management. By managing customer relationships, they aim to keep existing customers and enhance their satisfaction and loyalty. In the process of attracting and keeping customers, information technology (IT) plays a significant role (Duncan and Moriarty, 1998). IT is being used to shape company-customer communication (Wayland and Cole 1997; Bitner, Brown and Mueter, 2000; Parasuraman and Grewal, 2000) and to create, enhance and transform customer relationships (Gordan, 1998; Davis, 1997). Information-driven and service-oriented business, such as financial services, is a typical example illustrating the contribution and the impact of information technology in the service process, which involves intensive information exchange, personalised communication and personalised services. Banks use information technology to digitalise their financial services to become eServices, i.e., eBanking services.

Hoffman and Novak (1996) and Davis, Buchanan-Oliver and Brodie (1999) claim that the use of eCommerce as a means of enacting transactions and

relationships with customers is increasing exponentially. Their statement is also applicable to eBanking in the eServices context. The increasing number of personal eBanking accounts and corporate eBanking accounts in Hong Kong (Table 1.1) clearly illustrates the rapid growth of eServices in recent years.

Table 1.1 The Growth of eBanking Services in Hong Kong

Year	**Number of Personal eBanking Accounts**	**Number of Corporate eBanking Accounts**
2004	2 500 000	87 000
2005	3 300 000	162 500
2006	3 800 000	234 000
2007	4 900 000	307 000
2008	5 700 000	401 000
2009	6 200 000	477 000

Source: Hong Kong Monetary Authority Annual Reports

Given the increasing popular of eBanking services, it will be very interesting to investigate further how eServices contribute to the relationship between companies and customers. More specifically, it is worth studying how the Internet communication attributes of e-Services contribute to customer satisfaction and loyalty.

The Research Gap

Since offering services via the Internet is the global trend, it is important to explore eServices' impact on various marketing aspects, such as marketing of eServices, consumer psychology towards eServices, customer-company relationship development and management, customer satisfaction and loyalty.

Mainstream current eService research looks at satisfaction towards eServices from the information system perspective. Cheung, Zhu, Kwong, Chan and Limayem (2003) comment that researchers depend too much on the family of the Theory of Reasoned Action and neglect other theories such as Flow Theory.

Duncan and Moriarty (1998) point out that interactive communication is the foundation of customer-focused marketing, leading to better customer relationships. There is a lack of research focusing on the communication attributes of the Internet and on how these attributes contribute to the subsequent outcomes or consequences of services. In services marketing, the positive relationship outcomes or consequences that attract the most attention are satisfaction and loyalty.

Following the thoughts of Cheung et al. (2003) and Duncan and Moriarty (1998), the current research aims to fill the research gap: to find out how Internet communication attributes in the eService context influence eService encounter

satisfaction (i.e. service encounter level), and overall satisfaction and loyalty (i.e., corporate level) by using Flow Theory as the theoretical foundation.

Based on the above research gap, the research objectives are formulated. The research problem and research questions are also listed accordingly.

Research Objectives

With reference to the above research gap, relevant academic research studies and publications from financial institutions regarding eServices, eBanking and customer relationships are reviewed extensively. The following research objectives are formulated as follows:

- To identify the Internet communication attributes in the context of eServices from customers' perspectives
- To theorise the relationship between the identified attributes and customer satisfaction with and loyalty to eBanking services and the associated service providers
- To formulate an eServices model for eBanking

Essentially, these Internet communication attributes are multidimensional and relevant to consumer psychology and communication. It is argued that these attributes, specifically for eBanking services, consist of interactivity, control and involvement. As customer satisfaction and loyalty are the aims of the service

business, this research also focuses on eServices' impact on customer satisfaction and loyalty. It is hypothesised that these three constructs affect the outcome of eServices usage, i.e., customer satisfaction and customer loyalty.

More and more companies are adopting the Internet as a means of service offering and customer communication. This means offers a number of advantages for both service providers and customers, at least in efficiency and effectiveness. Financial institutions typically welcome this new means of services and communication to build customer satisfaction and loyalty. Specifically in Hong Kong, most of the retail banks are developing their eBanking services to serve customers and to build up an interactive communication relationship with customers.

Traditionally, financial institutions have emphasised the importance of customer satisfaction. They keep improving the service process and enhance customer satisfaction and loyalty as a consequence. As mentioned by a senior executive from a multinational bank in Honk Kong, eServices enhance the service process and will continue to play a critical role to enhance customer satisfaction. However, banks only focus on convenience, time saving, cost saving and remote accessibility as the major advantages. According to the focus group study findings, there are actually many underlying reasons for customers to adopt eBanking services. Thus one of the major objectives of this research is to discover the Internet attributes

specifically applicable to eBanking services and their impact on customer satisfaction and loyalty.

Research Problem and Research Questions

The research problem for the current research is how Internet communication in the eService context affects the relationship between customers and service providers.

The research questions are:

1. What are the Internet communication attributes of the eServices of financial institutions?
2. How do these Internet communication attributes contribute to customer satisfaction and loyalty?

These two research questions are studied with an exploratory qualitative approach in order to identify the attributes that have not yet been investigated in other research.

The contributions of the identified attributes to customer satisfaction and loyalty also have to be examined. The research questions are:

3. How does interactivity affect customer satisfaction with and loyalty to the eService provider?

4. How does control affect customer satisfaction with and loyalty to the eService provider?
5. How does involvement affect customer satisfaction with and loyalty to the eService provider?

The three attributes – interactivity, control and involvement – are identified in the qualitative study and literature review. Then the quantitative approach is adopted to study their relationship with customer satisfaction and loyalty. Survey research is used, as it collects a sufficient amount of data to quantify and verify the relationships among the three attributes and customer satisfaction and loyalty.

To answer all these research questions, a comprehensive literature review, qualitative studies in the form of expert interviews with eBankers and focus group studies with eBanking customers, and a quantitative study in the form of a questionnaire survey are conducted. A research model is also formulated and validated. The whole research process is recorded and is presented systematically in this thesis.

The Research Context

Financial service, being one of the most information-intensive and time-sensitive service business sectors, is an excellent case to illustrate service innovation using the Internet as a communication and service medium. Hong Kong,

as a major world financial centre, is believed to be the ideal and most accessible location to conduct the research.

eBanking in Hong Kong

The banking industry is chosen as the context for the current study for four reasons:

- All kinds of banking services can be delivered virtually in their entirety via the Internet. Also, customers can obtain the service and also evaluate the service outcome virtually via the Internet. Thus it is a perfect context to study and confirm the impact of the newly identified (such as eBanking service dependency) or defined Internet relevant constructs on relationship outcomes (such as eBanking service encounter satisfaction, overall satisfaction and loyalty).
- The banking industry is one of the major industries using the Internet comprehensively to serve customers. Banks are investing heavily in eService for both strategic and operational reasons. Thus it is an important industry that must be studied to find out the impact and significance of the Internet on customers.
- The fact that more and more customers are using eBanking for communication and transaction purposes.

- Focusing on the most typical eService usage i.e. eBanking services, facilitates the best understanding of Internet and eService usage because the variety of Internet associated services complicates individuals' usage and consumption patterns. Focusing is the best approach to explore customers' behaviour towards a newly adopted communication or service format.

The selection of location also critically affects the outcomes and findings of research. Hong Kong is the perfect location to conduct the current research for three reasons:

- Hong Kong is one of the major financial centres in the world. It ranks third in the world, according to the Global Financial Centres Index compiled by Z/Yen Group (2010) for the City of London Corporation. Hong Kong's significance is further strengthened by its adjacency to mainland China, which is the engine for Hong Kong's further development in the banking sector.
- Hong Kong has a world class Internet and communication technology network and well developed eBanking services.
- Hong Kong customers, including those eBanking customers, are sophisticated, experienced and demanding. A demanding condition facilitates the development of a world class eBanking service, which is the most worthy for study.

In Hong Kong, the Internet has already become a popular medium for some services, particularly banking and investment services (i.e., eService in general and eBanking services in particular). This trend is likely to persist and flourish with various push factors and pull factors, such as the ready supply of financial services from a wide range of sophisticated financial service providers, the demand to use these services from technologically aware customers, and the availability of a well-developed telecommunication infrastructure. Appendix A provides a detailed discussion on the eBanking environment in Hong Kong.

The Concept of eService and eBanking

Information technology, and specifically the Internet play a critical role in eService. Reynolds (2000) defines eService as web-based service while Boyer, Hollowell and Roth (2002) define eService as interactive services delivered on the Internet. Following Hoffman and Bateson's (1997) definition of services, Rowley (2006) extend their idea to define eService as the deeds, efforts or performances whose delivery is mediated by information technology, including the web, information kiosks and mobile devices. In eService, the customer's interaction or contact with the organisation is through technology, such as a website. It is clear then that eBanking services should be classified as a category of eServices.

However, different banks have varying perceptions of the importance of the Internet on their service portfolio. Some banks began investing heavily in Internet technologies as early as 1997, eager to be the first mover. Others thought that the impact of the Internet would not be felt for many years and took a "wait and see" attitude to this new medium. These different approaches represent the diversity of thinking in the bankers' minds. As bankers have different purposes and different definitions of eBanking, they have adopted different names for their eBanking services, such as Internet banking, eBanking and Cyberbanking. Thus there is some confusion regarding what eBanking is and what it means to offer eBanking services.

Defining eBanking

The Hong Kong Monetary Authority (HKMA) defines Internet banking as banking services accessible by customers through the Internet. HKMA uses eBanking as an umbrella term to describe all banking services delivered through a public or private network, including the Internet and wireless communication networks. Customers may gain access to eBanking services using an electronic device, such as a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM), kiosk, or touch-tone telephone.

According to the Information Systems Audit and Control Association (2003), Internet banking is defined as the use of the Internet as a remote delivery channel for

banking services. Services include traditional ones, such as opening an account or transferring funds to different accounts, and new banking services, such as electronic online payments.

For the current research, the term *eBanking* is used. It is defined as the banking services offered through the Internet to fulfil the communication and transaction purposes of bank customers by using personal computers.

As a result of the widespread growth of the Internet, customers can use this technology anywhere, any time to access a bank's website. The Internet, as an enabling information and communication technology, has facilitated customer-bank communication. eBanking makes banking services accessible by more customers, by eliminating geographic and proprietary systems barriers.

Defining the Research Constructs

With reference to the research questions, relevant literature, and the findings from the expert interviews and focus group studies with eBankers and eBanking customers respectively, the current research is designed focusing on seven key constructs: interactivity, control, involvement, eService dependency, eService encounter satisfaction, overall satisfaction and loyalty. These constructs comprise the measurement model.

Most constructs, including involvement, control, interactivity, service encounter satisfaction, overall satisfaction and loyalty have been well studied in traditional marketing or communication research. However, for the current research studying eService, their definitions have to be modified in order to reflect their specific characteristics in the eService context.

Based on the literature review and qualitative interview results, these seven constructs along with their definitions are as follows:

- *Interactivity* (*ITA*). Interactivity is a perception of customers with eBanking interaction in the eService context. Sender-receivers are cognitively involved in a two-way, personalised communication process with a high degree of responsiveness.
- *Control* (*CNT*). Control represents the determination of eBanking customers in the customer-eBanking interaction process. The eBanking customers perceive that the eBanking system is manageable with their Internet skills for the completion of certain banking tasks online.
- *Involvement* (*IVM*). Involvement is the psychological state of the eBanking customers' deeply concentrating on the online navigation with a high degree of interest.

- *eService Dependency* (*EDP*). eService dependency is the very high tendency of eBanking customers using eBanking to meet action orientation goals of banking instead of other options of banking.
- *eService Encounter Satisfaction* (*ESAT*). eService encounter satisfaction is the outcome achieved when a customer finds pleasurable experience in the process of customer-eBanking interaction and the fulfillment of his or her goals.
- *Overall Satisfaction with the Principal Bank* (*SAT*). Overall satisfaction with the principal bank is the eBanking customers' cumulative pleasurable experience with the overall service of the principal bank over time.
- *Loyalty to the Principal Bank* (*LOY*). Loyalty to the principal bank is the attitudinal commitment and behavioural action of customers to using the products/services offered by the principal bank repeatedly in the future.

Significance of the Research

From the academic side, the current research will enrich the eService, online consumer behaviour and Internet communication literatures. It also draws attention to nurturing customer satifaction and loyalty by the Internet as a medium from an Internet communication perspective in the eService context. The confirmed eService model also advances theories in eService, customer satisfaction at service encounter level as well as at corporate level.

In addition to the widely adopted Technology Acceptance Model, the research uses Flow Theory as the theoretical foundation to identify and to understand the exogenous constructs – interactivity, control and involvement – in the proposed eService model. Although criticised as a concept that is too broad and loosely defined (Koufaris, 2002) and for a lack of objective measurement (Marr, 2001), flow is a valuable construct (Koufaris, 2002) to enhance consumer researchers' understanding of the fundamentals of compelling online experiences (Novak, Hoffman and Yung, 2000). Thus the current research contributes to online consumer behaviour research by further operationalising dimensions of flow into measureable constructs and examining their impact on customer satisfaction and loyalty. Consequently, it contributes to a more concrete and precise conceptualisation of flow and it facilitates the further study of online consumer behaviour later on. The research is also original and innovative as it explores and theorises customer satifaction and loyalty with unique Internet communication attributes, such as interactivity and eService dependency. eService dependency is a concept that should be further developed as customers are getting more dependent on ICT to manage their daily life.

From the practical aspect, the research helps eBankers make use of Internet communication attributes to stimulate the usage of eBanking services and then build up customer relationships in the long term.

According to an eBanker, Hong Kong's eBanking service has reached the stage of customary. In this stage, eBanking customers are building their habit to use eBanking. The research is timely as its findings will help eBankers to formulate effective eBanking services strategy to build up customers' eService usage habit, as well as satisfaction at both service encounter level and corporate level.

Organisation of the Thesis

The thesis is organised into seven chapters as follows:

Chapter 1 provides an outlook of the whole thesis. It introduces the aims and objectives of the research. The research gap and its significance are highlighted. The research problems and research questions are presented. The concept of eBanking as well as all the constructs in the conceptual framework are defined accordingly.

Chapter 2 covers and analyses the relevant literature and research related to customer behaviour on eService and eBanking. Flow Theory is the theoretical foundation, in which, interactivity, control and involvement are considered as the exogenous constructs. The chapter begins with a review of Flow Theory in detail. Customer satisfaction, both at the eService-encounter level and the overall

satisfaction level, is the assumed outcome. The chapter then discusses satisfaction in general, and in an eService context in particular. Its relationship with another endogenous construct, loyalty, is also explored.

In the expert interviews with eBankers and in the discussions with eBanking customers in the focus groups, the concept of dependency on eService is identified and discussed as an outcome of customers' usage of eBanking. Thus, the chapter discusses the concept of dependency after the discussion of satisfaction and loyalty. It is followed by a discussion of the three exogenous constructs which are the antecedents of eService encounter satisfaction and eService dependency: interactivity, control and involvement.

Chapter 3 describes and analyses the development of the conceptual framework. With reference to the literatures and findings from expert interviews with eBankers and focus group study with eBanking customers, hypothetical relations between constructs are explained and justified. 12 hypotheses are formulated accordingly.

Chapter 4 concentrates on the research methodology and design for the current research. It aims to set up the necessary research grounding, provide a general overview of the research methodology adopted and discuss the plan and process of data collection. It highlights that a hybrid methodology approach, with

both qualitative and qualitative data collection, is adopted. The five critical steps in the data collection process are explained and justified: expert interview, literature review, focus group study, formulation of research model, and finally questionnaire survey.

Chapter 5 is a qualitative study used to identify the customer-eBanking Internet communication attributes and the associated relationship outcomes based on the views of eBankers and eBanking customers. The results, along with the literature review, provide a foundation to develop the research model and facilitate the development of the survey questionnaire.

Chapter 6 covers the quantitative research process to verify the structural model. The sampling process, instrument development and data collection procedure are discussed. It also describes the statistical analysis of the data collected. Structural equation modelling (SEM) is used as the analytical technique. It also explains the procedures for analysing the data, and reports the results of hypotheses testing and measures assessment.

Chapter 7 discusses the contributions of the current research to academics and practitioners, based on the findings and analysis from Chapters 5 and 6. It covers the theoretical contributions and managerial implications respectively. On the theoretical side, the research confirms the impacts of interactivity, control and involvement on

eService dependency, eService encounter satisfaction and overall satisfaction. An eService model is validated. On the managerial side, practical suggestions related to eService strategies and Internet communication strategies are made to enhance customers' dependency and satisfaction. Limitations of the research are also discussed, and directions for future research articulated.

CHAPTER 2

LITERATURE REVIEW

In Chapter 1, an overview of the research is presented. The research objectives, problem and questions are described. The research aims to fill the research gap by examining how Internet communication attributes in the eService context influence eService encounter satisfaction (i.e., service level), and overall satisfaction and loyalty (i.e., corporate level). The concept of eBanking and the context of the research are explained. The constructs in the conceptual framework are defined. The significance of the research from both theoretical and practical perspectives is also elaborated.

Aims of the Literature Review

In this chapter, relevant literature and research related to customer behaviour on eService and eBanking are explored and discussed. The aims of this literature review chapter are:

- To review Flow Theory and the relevant research for the purpose of conceptual development of the current research in general, and to facilitate the identification of concepts that are common to Flow Theory, Internet marketing and Internet communication in particular.

- To study and review relevant literature on customer satisfaction, loyalty and their relationship in marketing, IS and the online environment.
- To study and review customer/user behaviour in the Internet and eService contexts
- To study and review the relevant literature on constructs and attributes of Internet marketing and Internet communication leading to customer satisfaction and loyalty, particularly focusing on interactivity, control and involvement.

The focus of the current research is to study customer-eService interaction and its impact on satisfaction and loyalty in eBanking. Being a relatively new medium, the Internet is assumed to be used for business transactions. However, the current research has adopted a broader perspective and considers the Internet a communication medium that contributes to the establishment of the corporate-customer relationship. The vivid illustration of the corporate-customer relationship is customer satisfaction and loyalty nurtured as a result of favourable Internet communication and interactive customer experience.

The current research also argues that certain attributes of Internet communication contribute to the satisfaction and loyalty of customers. To justify and support this proposition, literature from different disciplines, including marketing, communication, information systems (IS) and psychology, are studied.

Structure of the Literature Review

After a careful and extensive review of literature, Flow Theory forms the theoretical foundation for the research. This chapter begins with a discussion of Flow Theory and its attributes. Relevant academic research on flow in Internet marketing are covered. As customer satisfaction and loyalty are the major relationship outcomes and the core constructs of the research, the chapter also provides a comprehensive review of satisfaction and loyalty in general, and in an eService context in particular. The relationship between these constructs is also explored.

In the expert interviews with eBankers and in the eBanking customer focus groups, the concept of the dependency of customers on eService and ICT is identified and discussed as an outcome of customers' usage of eBanking. Thus, the concept of dependency is also examined after the discussion on satisfaction and loyalty. It is then followed by a discussion of the three constructs which are the antecedents of customer satisfaction and dependency on eBanking: interactivity, control and involvement.

In an eService context, interactivity, control and involvement are considered as the perception of eBanking customers in the Internet communication process with eBanking systems. It is argued that these three constructs might contribute to

dependency, satisfaction and loyalty, which are the relationship outcomes of eService.

Next, the relationship between these constructs is discussed briefly. Together with the findings from the qualitative studies, the conceptual framework of the research will then be formed and presented accordingly in Chapter 3.

Flow Theory as the Theoretical Foundation

Flow Theory is identified as a major theory for review. Using it as the theoretical foundation helps to distinguish the Internet communication constructs influencing customer satisfaction with and loyalty to eService encounter satisfaction and eService dependency. Cheung et al. (2003) comment that researchers depend heavily on theories from the family of the Theory of Reasoned Action and ignore other theories such as Flow Theory. As shown in the findings from the eBanker expert interviews and focus group study, a number of attributes of Flow Theory are found, including interactivity, control and involvement. These findings are in line with Cheung et al.'s (2003) view that Flow Theory is the ideal theory to study the Internet and eService.

This theory is used by various research studies on user behaviour and responses of new technology-related applications and consumer behaviour on the Internet. However, flow is also a problematic concept as it is ill-defined (Koufaris,

2002) and has not been measured objectively (Marr, 2001). Chen, Wigand and Nilan (1999) suggest that flow should be operationalised according to specific web activities. Thus the current research will probably contribute to advance Flow Theory and its application by operationalising the concept of flow with certain Internet communication attributes in eBanking – a specific web activity, according to Chen et al. (1999).

The current research also enriches the literature in the well-researched satisfaction-loyalty paradigm as it identifies elements of Flow Theory contributing to satisfaction and loyalty. It also expands the application of Flow Theory to the research of eService, customer-company Internet communication and customer satisfaction. The current research also enriches the eService literature by developing an eService model of customer satisfaction-loyalty in eBanking.

The following section elaborates Flow Theory in detail and examines its attributes.

Reviewing Flow Theory

Flow Theory was originally proposed by Csikszentmihalyi (1975). Flow is a state of consciousness that is experienced by people who are deeply involved in an enjoyable activity. Csikszentmihalyi (1975, 1990, 1993, 1996) describes the eight components of the flow experience as:

- A balance between the challenges of an activity and the skills required to meet those challenges, i.e., personal skills well suited to the given challenges
- Clear goals with immediate feedback
- Concentrating and focusing on the task
- A sense of personal control
- Merging of action and awareness, i.e., one-pointedness of mind
- A loss of the feeling of self-consciousness
- Distorted sense of time
- Autotelic experience, one that requires no goals or rewards to the self/self-rewarding experience, i.e., the activity is intrinsically rewarding.

Challenges and Skills

A universal precondition for the flow experience is that the challenges an individual faces in a particular activity are equal to the skills he or she uses in meeting those challenges (Csikszentmihalyi, 1990, 1997). According to Jackson and Csikszentmihalyi (1999), once both challenges and skills are high, the likelihood of experiencing flow is maximised and the overall quality of the subjective experience will also be the highest.

Various researchers have examined such a relationship between the quality of subjective experience and perceived levels of challenges and skills (Carli, Delle Fave

and Massimini, 1988; Clarke and Haworth, 1994; Haworth and Evans, 1995; Wells, 1988); Moneta and Csikszentmihalyi (1996) measured daily variations in four dimensions of experience: concentration, desire to do an activity, involvement and happiness in four different social contexts, i.e., at school, with relatives, with friends, and in solitude. The findings confirm the hypothesis that the balance of challenges and skills has a positive effect on the quality of experience. Enjoyment is the experiential outcome when both challenges and skills are low or when both are high (Csikszentmihalyi, 1975).

Goals and Feedback

Flow experiences will occur within activities that are goal-directed and bounded by rules (Csikszentmihalyi, 1990). Csikszentmihalyi (1990) observes that people often engage in activities without a clear awareness of their purpose or of how well they are doing. However, flow experience will only occur when a person focuses on clear goals and receives meaningful feedback. Any goals, if sufficiently clear, can serve to focus attention long enough for one to achieve a flow experience (Csikszentmihalyi, 1993). Goals might have either social or economic value, but any feedback could be enjoyable, provided it is logically related to a goal in which one has invested attention (Csikszentmihalyi, 1990).

Total Concentration

For the flow experience to occur, the higher-than-average challenges require total concentration on the task. Csikszentmihalyi (1975) explains concentration as the centring of attention on a limited stimulus field. Such total concentration allows no room in one's consciousness for irrelevant thoughts, worries or distractions in the flow experience (Csikszentmihalyi, 1990).

Control

The flow experience also involves a sense of control. While exploring the relationship between locus of control and the flow experience, Keller and Blomann (2008) argue that individuals perceive control in situations in which they experience compatibility of skills and task demand.

The concept is further discussed in the following section, as it is one of the constructs to be incorporated in the research model.

Merging of Action and Awareness

Another distinctive feature of the flow experience is the effective merging of action and awareness. According to the explanation of Csikszentmihalyi (1990), when an individual becomes so involved in what he or she is doing that the activity becomes spontaneous or even automatic, the person merges with the performing actions. Such merging is made possible by total concentration. Csikszentmihalyi

(1996) points out that one's mind is often inattentive in daily life. However, flow the flow experience occurs when attention is so focused on the task, and the usual dualism between action and awareness disappears (Csikszentmihalyi, 1996).

Loss of Self-Consciousness

The flow experience occupies a person's total attention and all other irrelevant thoughts are excluded. During the flow experience, the self i.e., an individual's consciousness of his or her own being or identity, disappears from awareness (Csikszentmihalyi, 1990).

Distorted Sense of Time

Another dimension of the flow experience is a distorted sense of time, i.e., time seems to pass more quickly than usual.

Autotelic Experience

Once an individual becomes involved in an activity that exhibits most of the previous characteristics of flow, the experience becomes autotelic i.e., worth doing for its own sake. According to Csikszentmihalyi (1990), an autotelic experience is a self-contained activity which is done not with the expectation of future benefit but simply because the doing itself is the reward. As autotelic experiences are so satisfying and enjoyable, individuals have a strong desire to repeat the activity in order to have the experience again.

Flow and the Internet

Flow plays a critical role in the experiences of Internet users. Internet marketing scholars Hoffman and Novak (1996) embrace flow as the glue holding the consumer in the Web environment. Basch (1996) describes flow as what keeps users pointing and clicking long after they have found, or forgotten, what they went online for in the first place.

The following section reviews several important studies of flow in the Internet environment.

Conceptual Model of Flow in the Internet Environment

The Internet has become an important environment for business activities and marketing. Hoffman and Novak (1997) suggested that Flow Theory is central to the marketing question of how to develop the Internet into a worthwhile consumer experience. They define flow in the Internet environment as the state occurring during network navigation, which is characterised by:

- a seamless sequence of responses facilitated by machine interactivity
- being intrinsically enjoyable
- a loss of self-consciousness
- self-reinforcement.

(Hoffman and Novak, 1996)

In order to theorise the relationship between flow and online consumer behaviour, Hoffman and Novak (1996) developed a conceptual model of flow in a computer-mediated environment (CME) i.e., the Internet. Their model stipulates an explicit structure for direct and indirect influences on flow, the relationships between constructs and behavioural outcomes.

Hoffman and Novak (1996) argue that the flow experience requires a set of antecedents to occur and results in a set of consequences. Table 2.1 summarises their proposed set of antecedents and consequences.

Table 2.1 Antecedents and Consequences of Flow Experience

Primary antecedents	• Focused attention to filter out irrelevant perceptions and thoughts • Balanced skills and challenges of the interaction
Secondary antecedents	• Telepresence • Interactivity
Consequences	• Increased learning • Exploratory behaviour • Participatory behaviour • Perceived sense of control

Structural Model of Flow in the Internet Environment

The conceptual model of flow developed by Hoffman and Novak (1996) becomes the groundwork for empirical research. For example, Novak, Hoffman and Yung (2000), by following the Hoffman and Novak (1996) conceptual model of flow, developed and validated a structural equation model with components of compelling online experience. There are 13 constructs in total (see Table 2.2) measuring customers' online experience in their study. In addition, three Internet usage variables are also used to examine customers' online behaviour – when the respondent first started using the Internet, how much time she or he spent using it each day, and how much time she or he expected to spend using the Internet in the future.

Table 2.2 Constructs used by Novak et al. (2000)

Construct	**Definition**
Arousal	Corresponds to high challenge and moderate skill; serves as a theoretical correlate of challenge
Challenge	The consumer's opportunities for action on the Web
Control	Corresponds to high skill and moderate challenge; comes from both the Web user's perception of ability to successfully navigate through the Web environment and perception of how the Web responds to her or his inputs
Exploratory behaviour	Using the Web for "experiential" uses; visiting unfamiliar websites just for the sake of variety and curiosity
Flow	A cognitive state experienced during online navigation that is determined by (1) high levels of skill and control, (2) high levels of challenge and arousal, and (3) focused attention, and (4) is enhanced by interactivity and telepresence
Focused attention	A centring of attention on a limited stimulus field with the computer
Interactivity	To consider only the speed of interaction, thus operationalisation of interactivity is somewhat limited
Involvement	Enduring involvement, operationalised here as importance, is formed by the presence of situational and/or intrinsic self-relevance
Playfulness	An intrinsic motivating variable operationalised as imagination, flexibility and enjoyment
Positive affect	Positive subjective experiences
Skill	The Web consumer's capacity for action during the online navigation process
Telepresence	The mediated perception of the environment; the perception that the virtual environment with which one is interacting is more real or dominant than the actual physical environment
Time distortion	The perception of time passing rapidly when engaged in an activity

Although Novak et al.'s (2000) research is one of the most comprehensive attempts to quantitatively model flow, they only examine Internet users' flow experience as a general Internet experience. Chen, Wigand and Nilan (1999) comment that Novak et al.'s (2000) study does not operationalise the concept of flow as a situated experience. The respondents in their study could report any Web use experience they had had. Because different activities present different challenges and call for different skills, and the Web is a multi-activity interactive medium that facilitates many different creative, communicative and collaborative activities, Chen et al. (1999) argue that concepts such as flow, challenge and skill should be operationalised by specific Web activities.

In this research, the flow experience of the users is achieved in specific eBanking activities with specific goals in users' minds.

Flow and Online Shopping

Flow Theory is also applied to study online shopping. Koufaris (2002) uses Flow Theory to investigate how emotional and cognitive responses to online shopping influence consumers' online behaviour, particularly their intention to return to an online store and their likelihood of making unplanned purchases. As Koufaris (2002) realises that the concept of flow is too broad and is ill defined because of the

numerous ways it has been operationalised and applied, no pre-existing model of the flow experience is used in his study.

In his research, he constructs a conceptual model of online consumer behaviour by incorporating emotional and cognitive components used in flow research, namely, intrinsic enjoyment, perceived control, attention focus, concentration, challenge and skill. In addition, elements of Davis's (1989) Technology Acceptance Model, including perceived usefulness and perceived ease, and Zaichkowsky's (1985) product involvement are hypothesised as the determinants of emotional and cognitive responses of online consumers.

The research results are mixed with some hypotheses supported while some are not. Intention to return to the online store is positively related to shopping enjoyment and perceived usefulness but not perceived control, concentration or perceived ease of use. All the hypotheses involving unplanned purchases are not supported. Product involvement is positively related to both shopping enjoyment and concentration. Perceived skills are positively related to shopping enjoyment and concentration but not perceived control. The use of value-added search mechanisms is positively related to shopping enjoyment but not to perceived control or concentration. Finally, challenge is positively related to shopping enjoyment and concentration but not to perceived control.

Major Variables of Flow in Various Models

Flow is the process of optimal experience (Csikszentmihalyi 1990) in the online world. Hoffman and Novak (1996) find that flow is a cognitive state determined by high levels of skill and control and enhanced by interactivity. They support the usefulness of flow as a construct leading to a compelling online environment for Internet users. They conducted a small sample qualitative survey and found that 47% of the 147 respondents have experienced flow on a specific website. Their work forms the foundation of various research studies on flow and online experience.

To conclude, Table 2.3 summarises flow and its similar constructs, and relevant variables, either classified as antecedents or consequences, that are examined in different marketing, communication and IS research. Webster and Watson (2002) recommend the preparation of this kind of concept matrix for literature review. Such a matrix helps the organisation of the accumulated knowledge from previous research studies and the identification of knowledge gaps for future studies.

Table 2.3 Summary of Flow and Similar Constructs and Relevant Variables in Marketing and Communication Research

Research	**Flow and similar constructs**	**Antecedents**	**Consequences**
Agarwal and Karahanna (2000)	Cognitive absorption	Playfulness, personal innovativeness	Perceived usefulness, perceived ease of use, behaviour intention
Bridges and Florsheim (2008)	Online experience	Telepresence, time distortion, arousal, challenge, skill, control, interactivity, importance	Pathological Internet use, online buying
Chen, Wigand and Nilan (1999, 2000)	Flow	Involvement, loss of self-consciousness, enjoyment, time distortion	None specified
Dailey (2004)	Flow	Navigational control	Attitude, website approach/avoidance behaviour
Ghani and Deshpande (1994)	Flow	Focused attention, enjoyment, control, challenge	Exploratory behaviour
Hoffman and Novak (1996)	Flow	Skill, challenge, interactivity, vividness, involvement, telepresence, focused attention	Increased learning, perceived behavioural control, exploratory mindset, positive subjective experience
Huang (2003)	Construct incorporates control, attention, curiosity and interest	Complexity, interactivity, novelty	Utilitarian and hedonic web performance

Huang (2006)	Flow, situational involvement, enduring involvement	Control, curiosity, enjoyment, interest, risk, attention focus, personal relevance, self relevance	None specified
Korzaan (2003)	Flow	None specified	Exploratory behaviour, attitude, intention to purchase
Koufaris (2002)	Shopping enjoyment, perceived usefulness	Product involvement, skill, search mechanism	Intention to return
Luna, Perrachio and de Juan (2002)	Flow	Content characteristics, skill, challenge, perceived control, unambiguous demands, focused attention, attitude toward site	Revisit intention, purchase intention, purchase
Luna, Perrachio and de Juan (2003)	Flow	Attention, challenge, interactivity, attitude toward site	Purchase intention, revisit intention
Martocchio and Webster (1992)	Computer playfulness	None specified	Involvement, positive mood, satisfaction, learning
Novak, Hoffman and Yung (2000)	Flow	Online tenure, skill, control, interactivity, challenge, arousal, focused attention, telepresence, time distortion	Exploratory behaviour
Richard and Chandra (2005)	None specified	Reasons to visit, skill, challenge, interactivity, navigational cues, need for cognition, site involvement	Exploratory behaviour, attitude, prepurchase intention
Trevino and Webster (1992)	Flow	Control, focused attention, curiosity, intrinsic attention, ease of use, computer skill	Attitude toward technology, perceptions of communication effectiveness, quantity of communication, reduction of communication barriers

Webster and Ho (1997)	Engagement	Focused attention, curiosity, intrinsic interest, challenge, feedback, control	None specified
Webster, Trevino and Ryan (1993)	Flow	Control, focused attention, cognitive enjoyment	Perceived flexibility of software, expectation of future computer interaction, technology usage, communication effectiveness

An examination of Table 2.3 reveals considerable differences among the interpretation and understanding of flow in the findings of the reviewed studies.

There is no unified view regarding the components or antecedents of flow, and also the consequences. Relationships between variables differ from one study to another. The variables of control, interactivity/interaction, involvement/focused attention, skill, challenge and behaviour intention are the most frequently identified variables to understand flow.

However, the diversified and thus unclear conceptualisations of flow show that further conceptual refinement of flow in Internet marketing and eService is deemed necessary. It is then considered that qualitative research methods should be used to facilitate conceptual development and theory building on ill-defined phenomena. Chapter 4 (Research Methodology and Design) has a clear justification of the adoption of qualitative method as part of the data collection for the current

research in detail. Chapter 5 (Qualitative Data Collection, Analysis and Findings) explains the qualitative data collection process in detail.

In line with the above literature review, three concepts of Flow Theory are found and considered as important based on the findings from the qualitative study. These three concepts are interactivity, control and involvement. They will be further reviewed and elaborated in the later sections in this chapter.

The following section is the literature review of customer satisfaction. Customer satisfaction is considered as one of the important relationship outcomes in eService.

Customer Satisfaction in eService

The emergence of the Internet as a new marketing communication medium with customers has raised concerns about how the Internet affects customer satisfaction. Thus, consumer satisfaction on the Internet has become the focus of interest of many researchers (Cao, Gruca and Klemz, 2003; Cho and Park, 2001; Feinberg, Kadam, Hokama and Kim, 2002; Koivumaki, 2001; Luarn and Lin, 2003; Meuter, Ostrom, Roundtree and Bitner, 2000; van Riel, Liljander and Jurriens, 2001).

It is believed that customer satisfaction is one of the most important outcomes in Internet marketing. Its significance can be reflected in its ability to build up customer loyalty (Anderson and Srinivasan, 2003), to lead to repeat purchases

(Reibstein, 2002) and to improve market share and profitability (Reichheld and Schefter, 2000).

The following section discusses the thoughts and definitions of customer satisfaction. Two major perspectives relevant to the current research are the marketing perspective and the information systems perspective.

Defining Customer Satisfaction from the Marketing Perspective

Various early marketing studies defined satisfaction as an evaluative judgment of a post-purchase experience (Bearden and Teel, 1983; Churchill and Surprenant, 1982; Oliver, 1980; Oliver and DeSarbo, 1988; Selnes, 1993). Following this line of thought, satisfaction/dissatisfaction represents the discrepancy between prior expectation and the actual performance perceived after consumption (Tse and Wilton, 1988; Yi, 1990).

Oliver (1997) defines satisfaction as the consumer's pleasure fulfilment response. Woo and Fock (1999) believe that satisfaction is a judgment on a product or service providing a pleasurable level of consumption-related fulfilment. All these definitions are consequence-oriented, as they focus on an outcome of consumption. They also form the foundation of the well-accepted Expectation-Disconfirmation Theory.

Expectation-Disconfirmation Theory

The Expectation-Disconfirmation Theory theorises the causal relationship of expectation, perceived performance, disconfirmation and post-consumption satisfaction. Expectation is the prediction of the performance and serves as the comparison standard against perceived performance. Consumers attain satisfaction by comparing the performance of a product or service with their expectations about how it should perform (Churchill and Surprenant, 1982; Oliver, 1980; Oliver and DeSarbo, 1988; Tse and Wilton, 1988). If the performance outperforms expectations (positive disconfirmation) post-purchase satisfaction will result. If the performance falls short of expectations (negative disconfirmation), the consumer is likely to be dissatisfied (Oliver, 1980; Spreng, MacKenzie and Olshavsky, 1996). Thus satisfaction/dissatisfaction is dependent on the consumer's assessment of the service provider's performance, against the consumer's expectations (Danaher and Haddrell, 1998; Kotler, 2000; Luarn and Lin, 2003).

In contrast to such a cognitive view, Oliver (1980), Rust, Zahorik and Keiningham (1996) and Yi (1990) believe that satisfaction is the emotional reaction or feeling about the performance of the service providers.

Value Percept Disparity Model

The Expectation-Disconfirmation paradigm assumes customer satisfaction is essentially the outcome of cognitive processes involving the comparison of expectations and performance. However, Yi (1990) argues that consumers could be satisfied while expectations do not exist. Fornell and Wernerfelt (1987), Westbrook (1987) and Westbrook and Oliver (1991) also suggest that there are affective processes that also contribute to the explanation and prediction of consumer satisfaction. In these affective processes, personal values are important antecedents to satisfaction (Oliver, 1997; Westbrook and Reilly, 1983).

Originally proposed by Locke (1967; 1969), the Value Percept Disparity Model highlights the importance of customers' own personal values and the perceived values of the services. Personal values are needs, wants, or desires that form part of the cognitive framework for attitudes (Rokeach, 1973). Bloemer and Dekker (2007) define personal values as the enduring belief that a specific mode of conduct or end-state of existence is preferred by individuals. They serve as the prototypical standard that customers use to assess their service experiences (Spreng and Olshavsky, 1993; Westbrook and Reilly, 1983).

According to Westbrook and Reilly (1983), satisfaction or dissatisfaction is an emotional response triggered by cognitive-evaluative processes in which the

perceived values of a service are compared to one's own personal values. The smaller the disparity between the percept of the service values and one's own values, the more favourable the evaluation becomes, and the higher the level of positive affect i.e., higher level of satisfaction, and vice versa.

Westbrook and Reilly (1983) confirm the positive impact of value percept disparity on satisfaction. They argue that customers seek attainment of personal values rather than confirmation of their expectation on service attributes. Thus, personal values are important to explore satisfaction with services which are instrumental for attainment of personal values.

Equity Theory

Whereas the Expectation-Disconfirmation Theory compares the actual performance with the expected performance, equity theory compares cost spent and benefit enjoyed by the customers in an exchange.

According to Oliver (1997), customers expect a certain level of justice or fairness in exchanges, and they compare their own input and output with the input and output of the other social actors, including the service provider. Input includes costs such as monetary payments and other sacrifices like time consumption and stress experienced by consumers. Output is the consequence, probably the benefits and rewards received. Satisfaction is achieved because of the perception of equity

and fairness. Exchange is perceived as unfair or unequal and leads to dissatisfaction (Bolton and Lemon, 1999; Raymond and Young, 1985; Oliver and Swan, 1989). Thus, perceived costs are the key sacrifices associated with a service exchange and the primary determinants of customer satisfaction.

Once a customer perceives inequity, his or her options will be to change the imbalance and to achieve actual equity or to change the perception of the imbalance to achieve psychological equity. Another option the customer might adopt is to terminate the transaction or the service with the existing service provider and to shift to another one.

Equity theory is especially relevant in service businesses focusing on the long-term customer relationship. Service providers must consider to what extent their customers perceive the balance of rewards and costs to be equitable, and when customers find themselves in inequitable relationships which contribute to distressing situations (Huppertz, Arenson and Evans, 1978; Huseman, Hatfield and Miles, 1987).

Defining Satisfaction from the Perspective of Information Systems

Online customers are users of both products/services and information on the Internet. eService depends on the IS and the network as the means to interact with customers, to facilitate service delivery and to contribute to customer satisfaction.

When users recognise that the system is able to meet their information and service requirements, it is then perceived as effective. Thus, satisfaction is determined by the system's ability to fulfil the information needs of the users (Bailey and Pearson, 1983; Cyert and March, 1963; DeLone and McLean, 1992; Doll and Torkzadeh, 1988; Ives and Olson, 1984). As proposed by Cyert and March (1963), this concept is known as User Information Satisfaction (UIS).

Doll and Torkzadeh (1988) further expand UIS to investigate the End-User Computing Satisfaction (EUCS), which includes the constructs of content, accuracy, format, timeliness and ease of use, to measure end-user satisfaction. End-user computing is characterised by both information consumption and user interaction. They also claim that end-user satisfaction is the affective attitude towards a specific computer application by the users who interact with the application system directly.

eBanking involves interactions between the customers and the eBanking system and the associated applications. Given the lack of human-interaction in the eBanking process, system capability, information comprehensiveness and effective customer service are determinative factors affecting customer satisfaction in an Internet environment (Chen and Wells, 1999; Janda, Trocchia and Gwinner, 2002, Szymanski and Hise, 2000; Wolfinbarger and Gilly, 2003).

It is obvious that the literature on information systems is in line with the marketing definitions of satisfaction. Satisfaction is a construct with both cognitive and affective evaluative attributes to illustrate the attitude of an eService user/customer towards the eService.

Defining Customer Satisfaction in the eService Context

In the eService context, it is necessary to consider the dual role of an individual, as he or she is both the user of an IS and customer of the eService. Thus there are two levels of satisfaction: eService encounter satisfaction from the perspective of the users of an IS, i.e., the eBanking system in the current research; and the overall satisfaction from the perspective of the customers using the eService offered by the bank, i.e., the eBanking service as one of the service options contributing to the overall satisfaction towards the bank at corporate level.

eService Encounter Satisfaction

Transactional satisfaction, or service encounter satisfaction, is defined as an emotional or cognitive response by the consumer to the most recent transactional experience with an organisation (Oliver, 1993). Traditionally, service encounters represent the interactions between customers and frontline personnel of the service provider. To highlight the importance of certain interactions, Beaujean, Davidson and Madge (2006) propose the concept of moments of truth (MOT). MOT are the critical

moments that customers must act on immediately. There will then be a few customer–frontline interactions where customers have an unusual amount of emotional energy invested in the outcome. These interactions and encounters will be critical and more influential for building satisfaction and loyalty.

However, the advancement in ICT (information and communication technology) has led to self-service and remote access to services. Thus, the nature of the service encounter and of the interaction has been changed completely. The concept of the eService encounter is introduced in the current research to show the interaction between customers and the IS in the servicing process, i.e., the offering of eBanking services via the Internet.

Understanding the service encounter. Different researchers define the service encounter differently. Solomon et al. (1985) focus on the face-to-face interactions between a buyer and a seller. They recognise that service encounters of different types might involve self-service technology (SST). Shostack (1985) and Bitner et al. (1990) define service encounters as the period of time the consumer directly interacts with the service. Such direct interaction with the service also implies the automation of service encounters. Lovelock (1983) examined service in two aspects: the availability of the service outlet and the nature of the interaction between customers and the service provider. The nature of the interaction represents the situation of

direct physical interaction or indirect interaction with the support of other means of communication.

Classification of service encounters. Shostack (1985) proposed three types of service encounter.

- Remote encounters: Encounters occur without any direct human contact, such as an ATM and eBanking. Technology plays a critical role in the service-encountering process.
- Phone encounters: Encounters occur over the telephone. These encounters depend on the officers who are responsible for handling the phone calls from customers.
- Face-to-face encounters: Encounters are direct contact between a frontline officer and a customer.

In short, service encounters might be face-to-face in an actual service setting, over the phone or through the mail. The latest service encounter takes place over the Internet. From a service development perspective, it is clear that the role of ICT has become more influential.

For the current research, the term *eService encounter* is used for service encounters via the Internet. In the eBanking context, it is the eBanking service encounter. Satisfaction of this kind simply represents the associated response

occurring at a specific time which follows a specific transaction or service encounter (Bitner, 1990; Carman, 1990). Each encounter involves customer-company interaction. Each interaction contributes to the service encounter satisfaction and to overall satisfaction.

To generalise, eService encounter satisfaction is the the outcome achieved when a customer finds pleasurable experience in the process of using the eService to fulfil his or her needs and expectations.

On the affective side, consumers will be satisfied if they have an enjoyable and pleasurable experience in the process of using the eService enabled by the Internet as a medium. On the cognitive side, consumers will be satisfied only if what they actually get meets their needs and expectations. However, expectations and desires may vary among consumers, because of variations in demographic, situational and social factors (Hair, Bush and Ortinau, 2003; Kotler, 2000; Hodkinson, Kiel and Mccoll-Kennedy, 2000). These variations are reflected and illustrated in the antecedent constructs of the proposed framework, namely, interactivity, control and involvement.

Overall Satisfaction

Cumulative satisfaction or overall satisfaction views customer satisfaction in a cumulative evaluation approach. It requires summing the satisfaction associated

with specific products and services of a company in a continuous base and satisfaction with various facets of the company (Cronin, Jr. and Taylor, 1992; Parasuraman, Zeithaml and Berry, 1988). For the current research, it is the accumulation of eService encounter satisfaction and represents the overall satisfaction to the service provider as a whole i.e., satisfaction at corporate level.

eService Dependency

eService is considered as the offering of services via the Internet. People's dependency focuses on goals and needs (Grant et al., 1998). Memmi (1984) proposes that dependency is a relationship with a real or ideal being, object, group, or institution in connection with the satisfaction of needs. Thus an individual might depend on eService and its provider for fullfilment of needs and attainment of goals. In general, eService offers information to customers, facilitates customers' communication and interaction with service providers, and delivers service to customers. Rubin (1994) points out that the gratifications of needs and goals from a particular medium result in consumption dependence on the medium and produce a pattern of media use.

eService dependency represents the situation that once customers get used to using a particular eService, they will depend on it very much for goals attainment unconsciously. The concept of unconscious dependency is based on the automatic

process view of goal pursuit. Such an automatic process view highlights that individuals' behaviours are determined by mental processes operating outside of conscious awareness i.e., unconscious intentions (Bargh and Chartrand, 1999; Bargh, Gollwitzer, Lee, Barndollar and Trotschel, 2001; Dijksterhuis, Smith, van Baarne, Wigboldus, 2005; Wood, Quinn and Kashy, 2002). Bargh et al. (2001), Forgas, Williams and Laham (2005), Weinberger and McClelland (1990) support that many social behaviours are performed in an almost automatic, spontaneous fashion, without conscious cognitive processing. In the Internet context, Wang, Teo and Wei (2005) claim that consumers' habitual dependence on online communication is the intrinsic goal that they pursue automatically without cognitive processing.

eService dependency has to be distinguished from the willingness to depend. Willingness to depend means that one is volitionally prepared to make oneself vulnerable to the other party in a situation by relying on the other party (Mayer, Davis and Schoorman, 1995). It represents the intention and consciousness of the customers to depend on a particular party. Willingness to depend, according to McKnight and Chervany (2002), is a subconstruct of trusting intentions in customer relationships. McKnight and Chervany (2002) point out that the vendor should be honest, competent, benevolent and predictable in order to obtain customers' willingness to depend.

For the current research, eService dependency represents the customers getting used to an eService unconsciously for goal attainment. Attributes of eService, such as service interactivity, will lead to customers' dependency. Such a dependency situation can be used to predict the satisfaction of an eService encounter in particular, overall satisfaction with and loyalty to the service provider in general.

Media Dependency Theory

Dependency is also a concept studied by communication researchers. In their media dependency theory, Ball-Rokeach and DeFleur (1976) and Ball-Rokeach (1985) define media dependency as a relationship between media and audiences, in which gratification of audiences' needs relies on the resources that the media possess. This implies that people's needs and motives affect dependency. Rubin and Windahl (1982) proposes that media use can lead to media dependency. Dependency can be conceived along three general dimensions: play, orientation and understanding (Ball-Rokeach, 1985; Grant, Guthrie and Ball-Rokeach, 1991). Action orientation dependency relations concern the making of behaviour decisions and actions. Their conceptualization is crystallized as the individual media dependency (IMD) theory.

Internet Dependency

Loges (1994) demonstrates that the conceptualization of dependency is valid across media. Internet dependency is a relation reflecting users' reliance on the Internet to achieve goals. Internet users use and depend on the Internet for information, communication, social connection, service acquisition and entertainment. However, different researchers have different standards or measurements to operationalise the concept. Wang (2001) and Anderson (2001) use indicators such as usage frequency and duration of email, interactive games and web to represent an individual's Internet dependency. Chou and Hsiao (2000) find that Internet dependency can be predicted by communication pleasure, satisfaction, hours using bulletin boards and hours spent emailing others. Consequently, they confirmed that Internet users with Internet dependency perceive the Internet to be entertaining, interactive, and satisfactory. Ruiz and Sanz (2006) find that Internet exposure, online experience and affinity with the Internet positively affect Internet dependency.

Customer Loyalty

Following the satisfaction-loyalty paradigm, loyalty is the consequence of customer satisfaction. This section first discusses the concept of loyalty in general and then further explores the concept from the attitudinal and behavioural levels. Relevant literature related to loyalty in eService and Internet research will then be

reviewed with the purpose of identifying the fundamental theories of constructing customer loyalty in the eService context.

Loyalty at a Glance

Customer loyalty represents a fundamental marketing strategy for attaining a competitive advantage (Gould, 1995; Kotler, 1988; Reichheld, 1993). The development, maintenance, and enhancement of customer loyalty becomes the top priority of service providers. According to Abramson and Telford (1993), efficient business interaction with customers is composed of three components: motivation, purchase, and customer loyalty/retention. Customer retention is a key element in achieving long-term growth in service firms (Reichheld and Sasser, 1990).

As the majority of research does not view customer loyalty and customer retention as two separate constructs (e.g., Edvardsson, Johnson, Gustafsson and Strandvik, 2000; Ennew and Binks, 1996; Hallowell, 1996; Hennig-Thurau and Klee, 1997; Heskett and Schlesinger, 1994; Storbacka, Strandvik and Groenroos, 1994), and there are few studies which view them as two separate constructs (e.g., Gerpott, Rams and Schindler, 2001), the current research views the two as interchangeable.

Indeed, work on customer loyalty or customer retention is relatively rich in the service marketing literature. There are numerous studies which have linked loyalty or retention to all sorts of possible inputs and outcomes such as quality (e.g.,

Ennew and Binks, 1996; Bloemer and de Ruyter, 1998; Bloemer, de Ruyter and Wetzels, 1999), value (e.g., Sirdeshmukh, Singh and Sabol, 2002; Neal, 1999), satisfaction (e.g., Edvardsson et al., 2000; Johnson and Gustafsson, 2000; Martensen, Grempty and Kristensen, 2000; Bloemer and Kasper, 1995), positive word-of-mouth (e.g., Wirtz and Chew, 2002; Reynolds and Arnold, 2000) and profit (e.g., Hestkett and Schlesinger, 1994; Hallowell, 1996; Edvardsson et al., 2000).

There are also numerous studies that attempt to define the loyalty construct. Researchers have commonly used both attitudinal and behavioural measures to define and assess loyalty (Engel, Blackwell and Kollat, 1982; Oliver, 1999; Zeithaml, 2000; Rust, Zeithaml and Lemon, 2000).

Consumer Loyalty: A Behavioural Perspective

From a behavioural perspective, loyalty is the action of repeat patronage (Bloemer and De Ruyter, 1998; Kuehn, 1962; Lipstein, 1959; Neal, 1999; Selnes, 1993; Chandy and Tellis, 1998). A company can retain mere behaviourally loyal consumers as long as switching barriers exists. These barriers include technical and psychological difficulties to change suppliers, and high cost of switching.

However, the behavioural-based definition of loyalty is insufficient because it does not distinguish true loyalty from spurious loyalty (Anderson and Srinivasan, 2003). Pugh (1991), and Stum and Thiry (1991) find that truly loyal consumers will

not only perform repeated purchases but also exhibit other behaviour, such as purchasing across product and services lines and giving active referrals. True loyalty also encompasses a non-random, behavioural response as an outcome from evaluation processes resulting in commitment (Assael, 1992; Bloemer and Kasper, 1995; Keller, 1993).

For the current research, it is important to emphasise that the Internet is an environment that discourages behavioural loyalty, as it is effortless for customers to switch to competitors because switching barriers and cost are almost non-existent (Yang and Peterson, 2004). Thus building up of loyalty for eService cannot only focus on the behavioural side but should also focus on the attitudinal side. Prus and Brandt (1995) suggest that customer loyalty is the combination of attitudes and behaviours.

From Behavioural Loyalty to Attitudinal Loyalty

From an attitudinal perspective, consumer loyalty is considered as a specific desire to continue a relationship with a provider (Czepiel and Gilmore, 1987). Loyalty involves the emotional component of commitment, which encompasses affection, commitment and intention towards a particular service provider (Baldinger and Rubinson, 1996; Barnes, 2002; Chaudhuri and Holbrook, 2001; Dall'Olmo Riley,

Ehrenberg, Castleberry, Barwise and Barnard, 1997; Dyson, Farr and Hollis, 1996; Fournier and Yao, 1997; O'Malley, 1998; Baker-Prewitt and Sivadas, 2000).

Similarly, Oliver (1999) uses affective/conative loyalty to describe a higher-order, long-term commitment of a customer to the organisation. Oliver (1997, 1999) and Griffin (1995) further assert that it is a deeply held commitment to rebuy or repatronise a preferred product/service consistently in the future, thereby causing repetitive same-brand or same-brand set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviours.

Barnes (2002) found that consumers will be emotionally loyal when they feel appreciated, are greeted by their first name, are able to chat with customer service personnel and enjoy the experience of dealing with the company.

The Process Approach for Loyalty: Oliver's Four-Stage Loyalty Model

The four stages of the Loyalty Model propose that customer loyalty progresses in four phases, each phase representing a greater degree of loyalty (Oliver, 1997, 1999). These four stages are: cognitive loyalty, affective loyalty, conative loyalty and action loyalty.

This is a developmental process view on loyalty, and it further emphasises the significance of accumulation of the positive experience of customers. It further extends the above dual-components loyalty. Cognitive loyalty is similar to

behavioural loyalty, whereas affective loyalty is similar to attitudinal loyalty. Service quality evaluation and satisfaction are the indicators of cognitive loyalty and affective loyalty respectively.

The model then further emphasises the proactive behaviour of true loyal customers. Their conative loyalty and action loyalty are illustrated by the customers' high repurchase intention, preferential word-of-mouth recommendation, high retention and increasing share of visits. All these factors represent customers' satisfied attitude and commitment to those favourable service providers.

Based on the above discussion, it is more appropriate to conceptualise loyalty as including both attitudinal and behavioural elements. This is in line with Ajzen and Fishbein's (1977) attitude-behaviour consistency, which argues that attitudes are a strong predictor of behaviours.

To generalise for the current research, loyalty to the principal bank represents eService customers' attitudinal commitment and behaviour action to use the services offered by the principal bank. It is the consequence of their eService encounter satisfaction, eService dependency and overall satisfaction with the principal bank.

Now that the concepts of customer satisfaction and loyalty have been discussed in detail, the following section aims to elaborate on the relationship between these two concepts with reference to various studies.

Customer Satisfaction-Loyalty Relationship

Various studies have explored the relationship between customer satisfaction and loyalty in both offline and online environments (e.g., Bolton, 1998; Crosby and Stephens, 1987; Reicheld, 1996; Rust and Zahorik, 1993; Gronholdt, Martensen and Kristensen, 2000; Park and Kim, 2003; van Riel et al., 2001; Taylor and Hunter, 2002; Yang and Peterson, 2004). Although these studies were conducted in different contexts with variations in research methodology, they confirm with qualified support a positive satisfaction-loyalty relationship.

The effect of consumer satisfaction on loyalty is consistent with the existing literature on attitude-behaviour consistency. Evaluations based on direct experience are strong predictors of behaviour (Fazio and Zanna, 1978, 1981). As satisfaction is based on direct past experience, it affects behavioural intentions independent of other considerations. Rust et al. (2000) even proposed that the more satisfied customers are with a service provider, the more loyal they are to that service provider. Crosby and Stephens (1987) found that prior satisfaction increases the likelihood of a customer renewing her or his insurance policy. Bolton (1998) found that the duration of a relationship between a customer and a service provider is longer when the customer is satisfied.

Moderating Factors Influencing Satisfaction-Loyalty Relationship

However, the satisfaction-loyalty relationship does not seem straightforward. Hallowell (1996), Loveman (1998) and Reichheld (1994) question the satisfaction-loyalty relationship and argue that satisfied customers are not necessarily loyal customers. Anderson and Mittal (2000) argue that the links between customer satisfaction and customer retention can have asymmetric and non-linear aspects. Oliva, Oliver and MacMillan (1992) also proposed that the satisfaction-loyalty relationship is nonlinear.

These contrasting views reflect the fact that there might be other moderating variables influencing the satisfaction-loyalty relationship. Fornell (1992) and Anderson and Mittal (2000) found that the impact of customer satisfaction on customer loyalty is different in different industries. According to Jones and Sasser (1995), a competitive environment affects customer loyalty even if customers are satisfied with a service/product. In a highly competitive market, such as the automobile industry, in which product/service differentiation is low, a range of substitutes is available and customers' switching cost is low, and the positive influence of customer satisfaction to customer loyalty is weakened. Only highly satisfied customers are loyal. In contrast, in a business environment which is highly regulated or has limited competition, or has high switching costs, customers are loyal

even if they are totally dissatisfied. In this situation, customers become captives, i.e., there is false loyalty. The customers appear to be loyal because of a lack of good substitutes (Davidow, 1986; Burgeson, 1998).

Other factors that affect the satisfaction-loyalty relationship include: value attainment and positive mood (Bloemer, de Ruyter and Wetzels, 1999), customers' ability to evaluate the product/service (Selnes, 1993), customers' demographic characteristics, such as age or education (Mittal and Kamakura, 2001), and brand attitudes (Oliver, 1980; Yi, 1990).

Although various research confirms the satisfaction-loyalty relationship in a traditional market environment, there are also a lot of moderating factors influencing their antecedent-consequence relationship. The emergence of eService in an Internet environment makes the studying of customer satisfaction-loyalty more complicated but more interesting. In such a dynamic computer-mediated environment (CME), it is expected that other Internet-related constructs will be identified to enrich the satisfaction-loyalty model.

Customer Satisfaction and Loyalty in an Online Environment

In an online context, Taylor and Hunter (2002) found that satisfaction is a good predictor of loyalty in a business-to-business eService environment. Yang and Peterson (2004) confirm the satisfaction-loyalty relation in an online service context,

and van Riel et al. (2001) support the notion that satisfaction influences customers' intention to return to a site in an online shopping context.

According to Shankar, Smith and Rangaswamy (2003), satisfaction and loyalty have a reciprocal relationship, which means a positive reinforcement effect with each other, i.e., satisfaction increases loyalty, and loyalty reinforces satisfaction. They also found that the online medium itself strengthens this reciprocal relationship. Their research findings suggest that, contrary to general understanding, the online medium provides an opportunity for service providers to acquire loyal customers. The results imply that online service providers should not only invest in service quality improvement initiatives but also maintain websites that offer a good online experience for their customers, especially in the area of information depth and accessibility. As their model involves various constructs and variables, it is confusing and complicated to present a systematic view of influential constructs/variables on the satisfaction-loyalty model in an e-Service context. However, it highlights the significance of service quality, customers' online experience and the quality of information and IS.

In line with Shankar et al. (2003), Park and Kim (2003) consider the Internet an important source of information and confirm that information satisfaction has a positive effect on site loyalty

The above sections discuss satisfaction and loyalty in general and specifically in an online environment. The relationship between satisfaction and loyalty is also explored. However, research studying causality of various constructs/variables to satisfaction-loyalty in an online context is diversified and fragmented in theme, conceptual framework and research methodology. The findings are thus inconclusive. In an extensive review conducted by Cheung, Zhu, Kwong, Chan and Limayem (2003), the authors find that online consumer behaviour research has made significant progress over the past few years, but the research is broad and fragmented and no unifying theoretical model is followed. Thus, they propose a research framework with three key building blocks, namely, intention, adoption, and continuance, to analyse online consumer behaviour in a systematic way.

Following the thought of Cheung et al. (2003), the next section discusses their framework first. Their proposed variables and constructs form the topics and guidelines for qualitative data collection, i.e., the in-depth interviews with eBankers and focus group interviews with current eBanking customers/users.

Intention-Adoption-Continuance Model

Cheung et al. (2003), based on their revision of 351 online consumer behaviour research studies, concluded that the Theory of Reasoned Action, its family theories, including the Technology Acceptance Model (TAM) and the Theory of Planned

Behaviour, Expectation-Disconfirmation Theory, and Innovation Diffusion Theory are the dominant theories used in this research area. However, they also commented that researchers should try to explore new theories and frameworks.

Douglas, Morrin and Craig (1994) suggest that strong theoretical and conceptual frameworks can be developed through an integration of constructs from different research traditions and disciplines. Thus for the current research, such an integration strategy is adopted with the objective of developing a research model integrating constructs from different disciplines under the theme of interactive marketing and communication for customer satisfaction and loyalty in the Internet context.

By integrating Fishbein's attitudinal model (Fishbein, 1967) and the expectation-confirmation model (Oliver, 1980), Cheung et al. (2003) proposed a base model of Intention, Adoption and Continuance for further research. This base model is worth studying, as there is no prior research that attempts to link the three key concepts together to investigate the process of online customer behaviour as a whole.

After an extensive review of existing literature, Cheung et al. (2003) identified five major domain areas:

- Individual/consumer characteristics, such as motivation, knowledge, innovativeness, involvement, flow, satisfaction, attitude, experience, skills

- Environmental influences, such as culture, peer influence, exposure
- Product/service characteristics, such as tangibility, complexity, differentiation, price/cost, quality
- Medium characteristics, such as speed, ease of use, usefulness, reliability, interactivity
- Online merchants and intermediary characteristics, such as service quality, brand/reputation.

These domains with different characteristics have different impacts on the Intention-Adoption-Continuance Model.

Consumers and Medium as the Focus of Study in the Qualitative Study

The Intention-Adoption-Continuance Model offers a structural approach for the development of a conceptual model for the current research. Of the five domains proposed by the model, individual/consumer and medium were selected as the focus of study, with the aim to identify the constructs and attributes contributing to satisfaction and loyalty in an eService environment.

Based on the findings from the expert interviews with eBankers and the focus group interview with the eBanking customers, three major constructs were identified and consolidated: interactivity, control and involvement. These constructs are also

argued to be the antecedents of eService encounter satisfaction and dependency in eBanking. The following sections further elaborate on these three constructs in detail.

Interactivity, Control, Involvement and eService Encounter Satisfaction

In line with Ghani, Supnick and Rooney (1991), Ghani and Deshpande (1994), and Novak et al. (2000), the findings from the qualitative study of the current research also recognise that involvement (i.e., total concentration in Novak et al.'s (2000) words), control and interactivity are the key characteristics of flow.

Various research, such as Novak et al. (2000) and Koivumäki, Svento, Perttunen and Oinas-Kukkonen (2002) have identified positive subjective experience as a consequence of flow. Koivumäki et al. (2002) support the notion that flow predicts customer satisfaction. They found that an increase in flow of shoppers leads to an increase in the number of purchases made. The increase in the number of purchases actually represents the satisfaction outcome of customers to a certain extent. Thus, it is meaningful to look further at how the flow experience affects customer satisfaction in an eService context. It is logical to believe that eService encounter satisfaction will be determined by the features of flow, including interactivity, control and involvement, identified in the current research.

From the service providers' point of view, the experience of flow is a highly desirable outcome to achieve the satisfaction of users. Increasing the interactivity of

a website enhances two-way communication and responsiveness with the eService users. Then users will perceive satisfaction after visiting the eService site and/or after using the service offered via the site.

eService users' control and involvement during the interaction process with the eService provider also contributes to the eService encounter satisfaction, as users can manage to complete the banking tasks by themselves.

An increase in flow-related experience among users encourages further interaction and enhances encounter satisfaction. Thus, users who are satisfied with the eService encounter will probably continue to use the eService. The accumulation of eService encounter satisfaction will probably contribute to overall satisfaction and loyalty to the service provider. In the current research, it is the principal bank offering the eBanking service.

The following section further elaborates on the concepts of interactivity, control and involvement.

Interactivity as an Antecedent of eService Encounter Satisfaction and Dependency

As a distinctive characteristic of a new medium, interactivity has been studied by researchers from different disciplines. This section reviews the literature on interactivity and its impact on eService users, and more specifically its impact on customer satisfaction with and loyalty to the eService provider.

Significance of Interactivity

Interactivity is a fundamental topic in the communication discipline. Traditionally, the Stimulus-Response paradigm that postulates the one-way view of communication has dominated marketing communication research (Stewart and Pavlou, 2002). However, the emergence of the Internet as a new medium because of the advancement of communication technology, and the issue of "marketer-customer interactivity" has attracted attention from both relationship marketing research and marketing communication research.

Researchers who focus on the Internet believe the significance of the Internet's interactive nature, i.e., the ability of the user to receive and transmit messages, creates a totally different, new communication environment (Hoffman and Novak, 1996). Instead of the traditional model of "one-to-many" and "one-way" communication, the Internet is a "many-to-many" and "two-way" channel of communication (Hoffman and Novak, 1996; Rust and Oliver, 1994; Venkatesh, Dholakia and Dholakia, 1996). Duncan and Moriarty (1998), discussing the importance of interactive marketing communications in relationship building, emphasise that interactivity is a hallmark of the paradigm of marketing and communication.

Due to the important role of interactivity in understanding new media, researchers have studied interactivity from different perspectives. A thorough understanding of the complexities of interactivity and a precise, concrete conceptualisation that encompasses these various dimensions is necessary.

The following section provides a comprehensive review of interactivity. Specifically, the literature is organised by the definitions and dimensions of the concept of interactivity.

Diversified Definitions of Interactivity

Interactivity was originally defined as the nature of interpersonal communication either through a medium or without the aid of a medium (Blattberg and Deighton, 1991; Rafaeli and Sudweeks, 1997; Williams, Rice and Rogers, 1988; Ha and James, 1998) or as a property of the medium (Wiener, 1950; Steuer, 1992).

Fortin (1997) defined interactivity as the degree to which a communication system can allow one or more end-users to communicate alternatively as senders or receivers with one or many other users or communication devices, either in real time (as in video teleconferencing) or on a store-and-forward basis (as with electronic mail), or to seek and gain access to information on demand, in which the content, timing, and sequence of the communication is under the control of the end-user, as opposed to a broadcast basis. He also points out that:

- interactivity is a continuum;
- the synchronous nature of the communication is not a necessary or sufficient condition for interactivity to occur, but the speed at which the feedback is transmitted can affect the level of interactivity of a medium's function, especially in the case of machine interactivity;
- interactivity is a quality of a communication setting which can vary within the same medium.

Similarly, Rafaeli and Sudweeks (1997) indicate that interactivity is a process-related variable of communication settings. It is the extent to which messages in a sequence relate to each other, and especially the extent to which later messages recount the relatedness of earlier messages. In addition to focusing on the relatedness of messages, interactivity is the condition of communication in which simultaneous and continuous exchanges occur.

Before the Internet came into being, interactivity was an assumed attribute of interpersonal communication (Morris and Ogan, 1996). Because of the rapid rise of the Internet as a commercial medium, interactivity has emerged as a unique characteristic distinguishing it from other, traditional media.

As computer-mediated communication (CMC) allows asynchronous communication, Ha and James (1998) criticised the use of face-to-face

communication which requires synchronicity as a standard to evaluate the interactivity of CMC. They define interactivity as the degree to which the communicator and the audience respond to, or are willing to facilitate, each other's communication needs. Five dimensions of interactivity were identified:

- Playfulness
- Choice
- Connectedness
- Information collection
- Reciprocal communication.

Liu and Shrum (2002) incorporated the different perspectives proposed in previous research and define interactivity as the degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronized. Two dimensions underlying this construct are two-way communication and synchronicity.

Dimensions of Interactivity

As reflected in the above analysis regarding the meaning of interactivity, inconsistencies between definitions and their variation in focus make it difficult to draw concrete conclusions about the role of interactivity. Its "universal applicable quality" in various contexts shows that it is a construct with a multidimensional

nature. However, these views can be generalised into two perspectives, namely, the functional perspective and the contingency perspective (Sundar, Kalyanaraman and Brown, 2003).

Functional Perspective

Sundar et al. (2003) highlight that the presence of functions of an interface is sufficient to reflect its interactivity; this means the structural characteristics of the medium that contribute to achieve interactivity. For example, synchronicity may involve maintaining appropriate server structure, providing adequate bandwidth, and ensuring correct linkage between documents. The characteristic of this view is its focus on the communication media/hardware/system factors and their functionality and capacity for information exchange between the users. The functional view emphasises that communications are governed by the capabilities and features of media.

Following this direction, a number of studies have incorporated this view to examine interactivity. Table 2.4 exemplifies and summarises these views.

Table 2.4 Studies that Incorporate the Functional Perspective of Interactivity

Authors	**Nature of the Study and the Definition of Interactivity Adopted**	**Focus**
Ahern, Stromer-Galley and Neuman, (2000)	An empirical study that aims to find the effects of Web interactivity on the campaign communication process by using online experiments in a natural setting Media interactivity is defined by features such as audio and video. Human interactivity is defined by features such as bulletin boards and chat rooms.	Multimedia for two-way communication for higher involvement
Carey (1989)	A conceptual analysis which develops the definition of interactive media by focusing on the technological aspect Categories of interactivity are defined. Interactive media provide person-to-person communications, i.e., user-to-user interactivity, mediated by a telecommunications channel and person-to-machine interactions, i.e., user-to-computer interactivity.	Two-way communication that extends beyond the face-to-face setting, with the facilitation of exchange by the medium and technology
Deighton (1996)	An empirical qualitative study highlighting the impact of interactivity enabled by communication technology on corporate strategies and marketing strategies. A Web-centered marketing strategy is interactive, one-on-one communication and interaction with individually identifiable consumers. High-tech interactivity in the communication process represents the ability of the company to address individuals and to gather and remember the response of individuals.	Addressability and personalisation of interaction with all individual customers

Hanssen, Jankowski and Etienne (1996)	An empirical study that adopts both qualitative and quantitative methods A conceptual analysis of interactivity was conducted with an extensive literature review. Then there is a questionnaire survey with open-ended questions to explore interactivity from the users' perspective. Available choices, personalness, and transparency contribute to perceived interactivity. Equality of control between users and the program, linearity within a program, sufficiency of navigational information, degree and manner of decisions are valued by respondents in an interactive environment. Interactivity is determined by three aspects: a) Equality, such as participants, mutual activity, role exchange, control b) Responsiveness, such as mutual discourse, nature of feedback and response time c) Functional communicative environment, such as bandwidth, transparency and artificial intelligence.	Equality, responsiveness and sufficiency of navigational information are the system features in an interactive environment.
Heeter (1989)	A conceptual analysis which develops the definition of interactivity in relation to communication technologies Interactivity is considered a multidimensional concept with six dimensions: complexity of choice available, effort users must exert, responsiveness to the user, monitoring the information user, ease of adding information, facilitation of interpersonal communication.	Diversified capability of communication technologies facilitates interpersonal communication.

Jensen (1998)	A conceptual analysis by extensive literature review highlights how the media offer/allow choices by, information to, input from, and responses to users Interactivity is defined as "a measure of a medium's potential ability to let the user exert an influence on the content and/or form of the mediated communication".	Determination of users enabled by technology
McMillan and Hwang (2002)	An empirical study using the multi-stage method including literature review, expert interviews, focus groups and survey to identify and refine scale items to measure perceived interactivity Interactivity is determined by the capability of two-way communication, high-speed loading and high degree of engaging in the process of interaction.	Interactivity is a feature of the Web for two-way communication, user control and high loading speed.
Novak, Hoffman and Yung (2000)	Quantitative structural modelling research with data from Web-based consumer survey The comprehensive conceptual model illustrates that the flow experience in online environments during navigation is determined by various factors, including users' skill level and control, challenge and arousal, focused attention plus the enhancement by interactivity and telepresence. Consequently, the flow experience contributes to the users' exploratory behaviour in the Web environment. Interactivity is operationalised as the speed that contributes to "flow" and is based on measures such as waiting time, loading time, and degree to which interacting with the Web is "slow and tedious".	Interactivity is one of the variables that contribute to the flow experience of Web users.

Steuer (1992)	A conceptual analysis of telepresence by literature review. Interactivity is one of two determinants of telepresence Interactivity can be examined by the speed of response to input, the range of possibilities or attributes that can be manipulated, and the mapping which represents the way in which human actions are connected to actions within a mediated environment.	Interactivity determines the telepresence experience by speed, range and mapping.

Based on the functional perspective discussed previously, and the different perspectives on the new media, interactivity has the following significant functional characteristics:

- Interactive communication is enabled by technology (Carey, 1989).
- It has addressability and personalisation to individual customers (Deighton, 1996).
- Speed, range and mapping (Steuer, 1992) are the quality indicators of interactivity which affect the communication process, such as flow (Novak et al., 2000).
- Interactive media have multidirectional communication functionality.

The above list reflects the fact that the functional perspective focuses on the features or technical aspect of interactivity. However, it does not adequately specify the process, the outcomes and the impact of interactivity.

For interactivity to be realised, not only should the interface/system possess the functionality needed for mutual discourse, but it should also depend on the interactants and the message. User factors related to both cognitive and affective aspects, such as their skilfulness in using the Internet, perception and experience regarding the Internet and eBanking, are also critical factors affecting their adoption of the Internet as the communication means for services, and finally contribute to their satisfaction and loyalty as the outcome.

Contingency Perspective

Unlike the functional perspective, the contingency perspective emphasises that interactivity is not a characteristic of the medium but the experiential aspect of the interactive communication process as perceived by the interactants. For example, felt synchronicity, in contrast to structural synchronicity, is the degree of synchronicity perceived by the users in the interaction process. This may be influenced by the perceived responsiveness of the website or by users' expectations, which cannot be controlled by the company and the hardware structure.

Schumann, Artis and Rivera (2001) point out that as it is the consumer's choice to interact; interactivity is a characteristic of the consumer. The medium simply serves to facilitate the interaction. The contingency view believes that interactivity is a process-related construct involving users, media, and messages.

A number of studies incorporate the contingency perspective of interactivity. Table 2.5 exemplifies and summarises these studies.

Table 2.5 Studies that Incorporate the Contingency Perspective of Interactivity

Authors	**Nature of Study and Definition of Interactivity Adopted**	**Focus**
Bezjian-Avery, Calder and Iacobucci (1998)	An empirical study using controlled experiment to examine participants' interactive advertising exposure experience. It was found that interactivity interrupts the process of persuasion. Purchase intention and the viewing time declined when the advertising was interactive. Interactivity is defined as the ability to control information by the consumers.	Consumers play an active role in interactive advertising to control the information flow and presentation.
Cho and Leckenby (1999)	Empirical survey research exploring the impact of interactivity on advertising effectiveness. It was found that a higher degree of interactivity yields better advertising effects i.e., favourable attitude toward the brand, and high purchase intention. Interactivity is defined as the degree to which a person actively engages in advertising processing by interacting with advertising messages.	Consumers' active involvement in the advertising process represents interactivity.

Ha and James (1998)	A content analysis of 110 business websites was conducted to examine their interactivity, according to interactivity's five dimensions: playfulness, choice, connectedness, information collection and reciprocal communication. It was found that the most prevalent dimension of interactivity is reciprocal communication. Interactivity is defined as the extent to which the communicator and the audience respond to, or are willing to facilitate, each other's communication needs.	Mutual facilitation and response determine interactivity.
Heeter (2000)	A conceptual analysis discussing the conceptualisation of interactivity and domains for its operationalisation. A participant-centred perspective on interactivity is proposed and a participant-channels-experience model is formulated. Six criteria are mentioned to characterise the optimal experience of interactivity: skills, goals, feedback, control, concentration and involvement.	Interactivity is essential for the flow experience of the participants in an interactive environment.
Liu and Shrum (2002)	A conceptual analysis discussing the multidimensional nature of interactivity by literature review and by comparing popular forms of online marketing tools. Dimensions underlying the interactivity construct are two-way communication and synchronicity. Interactivity is defined as the degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronised.	Interactivity is determined by the mutual influence of communication of participants plus medium and situational factors.

Rafaeli (1988)	A conceptual analysis by literature review and a responsiveness model of interactivity are proposed. It highlights the conditions for full interactivity. Consequently, satisfaction is the most obvious effect of increased interactivity. Interactivity is defined as an expression of the extent that, in a given series of communication exchanges, any third (or later) transmission (or message) is related to the degree to which previous exchanges referred to even earlier transmissions.	The responsiveness and message relatedness of the participants determine interactivity. Satisfaction is an outcome of interactivity.
Williams, Rice and Rogers (1988)	A comprehensive qualitative analysis of the new media. New media have three special and interrelated dimensions: interactivity, de-massification and asynchronicity. Interactivity is defined as the degree to which participants in a communication process have control over, and can exchange roles in, their mutual discourse.	Mutual discourse, exchange of roles, and control between participants determine interactivity.
Wu (2006)	An empirical study to validate a conceptual framework with antecedents and consequences of perceived interactivity. The antecedents are of three types: website factors, site visitor factors and situational factors. The consequences are measured by Web traffic, attitudinal and behavioural variables. Perceived interactivity of the website is conceptualised as a psychological state experienced by a site visitor during the process of interaction, with dimensions of perceived responsiveness and perceived personalisation.	Interactivity is determined by website factors, site visitor factors and situational factors.

Based on the contingent view discussed previously, interactivity has the following significant user experiential characteristics that are most commonly proposed by various researchers:

- Responsiveness/synchronicity, proposed by Dholakia, Utpal and Bagozzi, 2001; Ha and James, 1998; Hanssen, Jankowski and Etienne, 1996; Heeter, 1989; Liu and Shrum, 2002; Roehm and Haugtvedt, 1999; Steuer, 1992; Straubhaar and LaRose, 1996; Wu, 1999.
- Personalisation/customisation, proposed by Dholakia et al., 2001; Ha and James, 1998; Roehm and Haugtvedt, 1999.
- Two-way communication, proposed by Ha and James, 1998; Heeter, 1989, 2000; Liu and Shrum, 2002; Williams, Rice and Rogers, 1988.

In addition, attributes including enjoyment, information accumulation, message relatedness, control and navigation are proposed.

An Integrative View

The functional view and the contingency view have different emphases and significance. To develop a comprehensive understanding of interactivity, an integrative view is more appropriate and has been adopted for this research.

Interactivity, being a unique attribute of Internet communication, has both functional and contingent characteristics. For example, two-way communication is a

characteristic determined by the functional side, including the capacity of the communication network, website capability enabled by the hardware/software and corporate strategy, and by the contingent side, such as the skilfulness and perception of the customers/users themselves. Consequently, all these functional and contingent factors determine the achievement of users' goals, and finally contribute to the relationship outcome between the corporation and the customers: eService encounter satisfaction, eService dependency, overall satisfaction to eService provider and loyalty to eService provider.

Attributes of Interactivity in the Online Environment

Based on the above literature review and the analysis from qualitative studies, three attributes were found to be the most useful for interactivity in the context of eService: two-way communication, personalisation and responsiveness. These three attributes are discussed in the following section.

Two-way Communication

Day (1998) argues that the essence of interactive marketing is the use of information from the customer rather than about the customer. His argument illustrates the importance of mutual and two-way communication. In the interactive marketing perspective, two-way communication is important in creating a compelling consumer experience. According to Liu and Shrum (2002), two-way

communication refers to the ability for reciprocal communication between companies and users, and between users and users. Hacker (1996) applies interactivity to the Internet context, defining it as two or more message exchanges between people (mediated or not) in which the third and later messages are in response to the earlier messages. Hacker (1996) also emphasises that the Internet was heralded for its potential to reduce hierarchical barriers to communication and promote opportunities to communicate between corporations and customers. All these views support the notion that Internet technology facilitates reciprocal communication, which further encourages two-way communication.

Traditional media are effective in transmitting messages from companies to consumers but not from consumers to companies (Hoffman and Novak, 1996). It is then difficult, and companies have to use other channels or other methods, to gather information from consumers. The Internet changed this traditional one-way marketing communication and makes instant communication and feedback possible. However, the creation of corporate-customer two-way communication via the Internet is customer-determined. Using eBanking as an example, it is the customer's initiative and decision to register to use eBanking services or to let the banks have their email address for communication. After registration or the customers giving the banks the email address, two-way communication becomes a possibility. If

customers do not do that, the banks have no way to communicate with the customers via the Internet. This scenario actually reflects the decisive role of customers in the Internet communication process of eService and illustrates the eService attributes of control.

A typical example of two-way communication is the ability to complete transactions directly online. The Internet is the only medium that can be used for transactions without the help of other tools. All activities occur in a transaction, such as service terms and conditions, pricing information, order placing, and payment, and can be done on the eBanking platform. The ability to conduct transactions online greatly enhances two-way communication between banks and consumers. Two-way communication on the eBanking platform also makes it easier for banks to understand eBanking customers' behaviour better.

Two-way Internet communication can be implicit or explicit. For explicit two-way communication, customers can visit the bank's website, complete a transaction, search for information, fill out a form, or send email, and the bank will give feedback to these requests. Customers, in response, will also give feedback. In this process, two-way communication gets started and might contribute to a favourable experience of the customers.

Implicit two-way communication is facilitated by data mining techniques that track customers' online behaviour. By tracking the time a customer stays at the eBanking site, the task completed and the type of information looked for, banks can understand a customer's interest in their services and marketing messages. It can also help to personalise their services/information to fit their needs.

Personalisation

For many business websites, the key to success is the number of customers that use the site and keep returning to make purchases (Cox and Dale, 2001). In this situation, it is important for the company to take the initiative to know the preferences and interests of the customers.

According to Peppers and Rogers (1993), personalisation means offering unique services to customers individually. In order to manage and serve customers effectively, they suggest the one-to-one marketing strategy of Identify-Differentiate-Interact-Customise Model (IDIC Model):

- Identification: collect reliable data on customers' needs and preferences in order to know and understand individual customers well.
- Differentiation: differentiate customers in terms of their lifetime value and needs, and then prioritise different groups accordingly.

- Interaction: optimize contact with individual customers by using their preferred communication channel, engage them by using the communication format they enjoy the most.
- Customisation: give exactly what customers want by personalisation of product or service to the customer individually.

Following Pepper and Rogers' line of thought, personalisation is most practical in interactive media such as the Internet. eService providers can identify, differentiate, interact with customers individually according to their demographic information, online navigation and transaction history, and then personalise services and offers to each of them.

In eService, personalisation involves the creation of specialised content for a prospect with a known profile, by choosing from an array of existing content modules (Roberts, 2003). Websites must form relationships with their customers (Cox and Dale, 2001). For eBanking services, personalisation is a very favourable strategy to offer tailor-made banking services for customers. Currently, banks in Hong Kong are actively using personalisation as the strategy for marketing and cross-selling purposes via their eBanking platforms.

Technology-enabled personalisation. In fact, personalisation is not a new concept, because successful marketing emphasises the development of individualised

relationships with customers based on their specific needs. However, technology enables cost-effective personalisation for the masses. Developments in ICT have opened new possibilities to collect and analyse customer data, to communicate with customers and deliver service to them, and hence execute personalised marketing. Hanson (2000) believes that personalisation illustrates the basic nature of the present market environment. The customer wants products or services which satisfy her or his needs in the best possible way. Competition is getting tougher and more global in most business branches. Personalisation is the way to keep current customers satisfied.

In the eService context, personalisation is the use of technology and customer information by the service provider to tailor-make interactions and content for each individual customer. Using information either previously obtained or provided in real-time about the customers, the exchange between the parties is altered to fit that customer's stated needs and the needs perceived by the service providers based on the available customer information. The purpose of this application used in eService is to:

- better serve the customer by anticipating needs;
- make the interaction efficient and effective, and satisfying for both parties;
- build a relationship that encourages the customer to return, i.e., building

customer loyalty.

From the service providers' perspective, personalisation is a comprehensive process containing the gathering and analyses of customer information from internal and external sources and through customer interactions, personalising the marketing mix elements based on customer profile and formulating relevant marketing activities to individual customers.

The service provider offers personalisation at two levels: information content/communication message and service offering. In an eService context, service providers personalise customers' Internet account pages, the pages' information content and service offered to the users. Such personalisation can be based on implicit data, such as user history, user's habits and preferences, click-through rate, previous pages viewed, or previous transactions conducted. The personalisation may be done by the user, the service provider, or both.

From the customers' perspective, personalisation means that the services are offered according to their personal needs and conditions. In the personalisation process, customers will be active participants and co-producers of the service offering.

Grönroos (1978) and Gummesson (1979) share similar ideas. They believe that customers are found to be a resource participating as co-producers in the service

process. Grönroos (2000) defines services as processes that consist of a set of activities which take place in interactions between a customer and people, goods, systems and infrastructures representing the service provider. Grönroos (2006) highlights that facilitating interactions and the management of interactions between the service providers and customers becomes a more productive focal point. Personalisation is clearly a critical function of the systems to facilitate interaction and management of interactions, as well as an outcome of co-production. Such active participation in the communication and service process is a factor creating satisfaction and loyalty in the e-Service context.

To support the customers' involvement in the interactive process and the customer-driven value-creating process, Grönroos (1994) also points out the importance of customer data and its value. Thus a real time information system is of great use for real time information exchange and for the flexibility and customisation of products and services.

Ghosh (1998) and Mols (2000) state that eBanking offers personalised services to customers for building customer satisfaction and loyalty, because they can automatically track, through the Internet, individual financial service usage.

For eBanking service, banks are able to track customers' interests and banking behaviour, help customers make choices by organising information and

prioritising it based on their individual preferences. Even the service offering can be personalised according to the users' eService usage situation and financial conditions.

Personalisation is an important attribute of the interactivity construct, as it requires customer participation in the service process and customers immediately enjoy the benefits of personalisation. For the current research, personalisation is the creation of communication and service to fit the individual requirements of a customer, as a result of the interactive communication between eService provider and customer.

As there is an increasing variety of service options and products offered via the eService channel, personalisation of communication with customers will be a more effective approach to offering banking services. Once customers are offered personalised services, it is assumed that there will be a high potential for higher eService encounter satisfaction.

Responsiveness

Traditional mass media provide very limited channels for customer-company interaction. Even when they do, the time elapsed between sending out a message or request and receiving a response is usually quite long. Thus, the communication is asynchronous and has a low degree of responsiveness.

In contrast, the Internet is able to make the communication much more responsive and synchronised. It takes only a few seconds from inputting a request to getting a response.

Responsiveness is essentially an attribute of interactivity because it requires both the eService provider and customers to be responsive to each other at the same time. In an Internet context, customers/users expect responsiveness from the eService provider, and they perceive and judge responsiveness from the time gap between their input/request and the service provider's responses/feedback. Thus it is argued that responsiveness is an indicator of interactivity.

Various studies reveal that there is a significant correlation between website download speed and Web user satisfaction (Muylle, Moenert and Despontin, 2004; Hoffman and Novak, 1996). Holt (2000) stresses the importance of a fast downloading homepage. As customers are impatient and have a high degree of expectation but narrow tolerance level for services, all eService providers must address speed and anticipated Internet capacity needs as of prime importance. Madu and Madu (2002) also found that 48% of Web users abandon their transactions due to the website's poor performance, especially in the form of site downloads. Steuer (1992) proposed speed of interaction, range and mapping as three major factors affecting interactivity. According to Liu and Shrum (2002), synchronous

communication refers to the degree to which customers'/users' input and the responses they receive from it in a communication process are simultaneous. Synchronous communication is central to interactivity (Kiousis, 1999; Murray, 1997; Steuer, 1992; Straubhaar and LaRose, 1996). However, their views are limited to a functional and structural perspective focusing on the hardware capabilities.

For the current research, interactivity is a process of two-way and personalised interaction and responses between customers and the service provider. Responsiveness is the conceptualisation from the contingency view reflecting customers' perception. The focus is on the degree of responsiveness as perceived by the users while they are using the Internet as the channel of communication.

To achieve responsive communication, the service providers must be able to respond to user actions and requests in a timely manner on two levels:

- System responsiveness: the information system, i.e., the hardware responses to information requests automatically by drawing current information from the database to the customers; and
- Manual responsiveness: the online customer services personnel respond to customers' requests in a personalised approach in the eBanking platform.

It is argued that responsiveness from the service provider is essential to achieve interactivity. Responsiveness is important to create a positive interactive

online experience for the customers/users. It also represents the eService provider's reactions to customers' requests and needs.

Responsiveness is particularly important in the eBanking context, as online transactions and information are available for users. The Internet is the only communication medium that can be used for immediate transactions with no additional tools. All the necessary activities in a transaction, including price quotation, service term information, order placement, pricing and payment, can be done in the eBanking site. Thus, for all transactions of financial services via the Internet, responsive communication is a necessary condition. Users go through the transaction process step by step. The completion of each step will have instant confirmation from the system until the completion of the whole transaction. Once problems occur, instant support has to be offered.

However, responsiveness is not easy to achieve. Because of technology limitations and users' cognitive and perceptive constraints, there are occasions when responsiveness cannot be achieved on the Internet. For example, a user may click on a link and receive a "page not found" error message, or the online traffic to access the eBanking server is very heavy. A user may also have to wait for 24 hours before his or her email to the bank is answered.

It is also argued that responsiveness influences user satisfaction. Dellaert and Kahn (1999) found that Web waiting time negatively affects consumer evaluation of a website. Thus, the current research lends support to the view that responsiveness is an attribute of interactivity which affects satisfaction.

Interactivity, eService Encounter Satisfaction and Dependency

Nowadays, companies put great effort into enhancing communication and interaction with customers and encourage more active participation of the customers in the service process. Greater interaction between the service provider and the customer generally enhances satisfaction with the service experience (Zeithaml et al., 1988). Krishnan et al. (1999) found that new channels, such as IT-enabled call centres and the Internet are important in determining customer satisfaction. This close interaction aims to enhance customer satisfaction.

In an eService context, Liu (2002) reports a positive relationship between website interactivity and user satisfaction, although her study was conducted in an experimental setting. Thus it is worth finding out how interactivity contributes to eService encounter satisfaction.

Novak et al. (2000) support the multidimensionality nature of interactivity. In line with their view and the above analysis, interactivity has the attributes of two-way communication: personalisation and responsiveness. Studies have revealed

that there is a significant correlation between these attributes and Web user satisfaction (Muylle et al., 1998; Hoffman and Novak, 1996). Thus, it is logical to hypothesise that interactivity is the independent construct influencing eService encounter satisfaction and eService dependency.

By considering satisfaction building a process, there are at least two levels of customer satisfaction: eService encounter satisfaction, which represents the satisfaction of a specific interaction, and overall satisfaction, which represents the cumulative outcome of interactions. These two aspects of customer satisfaction are discussed in the section, "Defining Customer Satisfaction in the eService Context".

Control as an Antecedent of eService Encounter Satisfaction and Dependency

The concept of control has different meanings in IT and psychology. From the IT perspective, it focuses on where control lies between user and system. In the Internet context, control moves between users and the Internet, passing back and forth between them.

Norman's (1988) Theory of Human Decision-making describes control as how a user's general goals drive two stages: execution and evaluation. Execution means the formation of intention to act based on the user's goals, the formation of a sequence of actions, and finally the execution of these actions. Evaluation involves perception of the result of the actions, interpretation of the result, and evaluation of

the result. Finally, the user evaluates the action in the context of his or her goals and this evaluation contributes to the formation of future intentions to act.

From the psychology perspective, the contingency view to understand control is well accepted. Locus of control, according to MacDonald (1973), refers to the extent to which an individual perceives contingency relationships between actions and their outcomes. Leone and Burns (2000) define locus of control as a generalised expectancy concerning one's behaviour-outcome.

According to Rotter's (1954) Social Learning Theory, control refers to the extent to which an individual perceives events or behaviour to be determined by him or her or by external influences. The locus of control is internal if an individual perceives his or her own behaviour as the determining behaviour. The locus of control is external if he or she perceives it as being attributable to chance, luck or controlled by others (Rotter, 1967).

Following Rotter's argument to analyse control in the Internet environment, internal locus of control means the users perceive their control of the interaction process with the Internet, whereas external locus of control means the Web or the system controls the interaction process.

In the Internet context, it is argued that the locus of control resides with the users most of the time, as it is the users' choice and decision to interact and then

produce an interactive experience or to stop interacting with the Internet/service provider. The Internet is a powerful cognitive tool while the users maintain control, interpret the responses or feedback, and consider the next action to undertake. However, users' ability to control is partially dependent on their skilfulness in using the Internet. If the user's skills with the computer or Internet are inadequate, then the user loses control and the Internet becomes an obstacle for task completion and goal achievement. Wallace (1999) speculates that users with a high internal locus of control may enjoy this sense of control in the Internet environment. Consequently, they spend significant amounts of time online and become Internet-dependent.

Flow and Control

Ghani, Supnick and Rooney (1991) found that flow is significantly correlated with perceived control, although they do not study in depth the relationship between flow and control. Novak et al. (2000) also identified the importance of control to positive online experience. For the current research, it is emphasised that control constitutes flow experience in the online environment.

Control is very important for goal-directed behaviour. Bjorn-Andersen et al. (1986) point out that managers react favourably to computer systems, as they facilitate their control and reduce uncertainty in a work environment. In other words, control is more important than challenge for individuals in certain situations. It is

thus true for eBanking customers; they need control and certainty, as their eBanking activities involve financial activities with risk implications. Thus, for goal-directed behaviour, control is a critical element for flow experience to occur.

Control in the Online Environment

Research on human-computer interaction indicates that one of the most frequent explanations for why people find computer games so captivating is the powerful sense of control these games gives their players (Lepper and Malone, 1987). Similarly, in an Internet environment, users want control over the interaction with the eService providers.

The question then arises of how much control users actually achieve. It is argued that control can be reflected by users' characteristics, such as their skilfulness to control. As suggested by Laurel (1993), a highly complex simulation that has many user-controlled options or high interactive range may give an individual who is highly skilful in using the Internet the perception of having full control to explore and experiment extensively. In contrast, another user who is not skilful in using the Internet might feel out of control.

The degree of control is not externally determined by the software or environment but rather by a combination of the environment and the user. An important measure to research here is the perception of control that the user has,

rather than the characteristics of the environment itself. To date there has been limited research to explore users' control in the Internet environment and in the context of eService.

Attributes of Control in the eService Context

For the current research, it is argued that control is an independent construct for customers' goal-directed behaviour of using eBanking. It refers to how users perceive their ability to determine various aspects of Internet interaction, such as information acquisition and transaction completion, with the eService provider.

According to Hoffman and Novak (1996), control is defined as the voluntary and instrumental action taken by Internet users with existing Internet skills and personal preferences. The Internet features a network of linked content with parallel and non-linear structure. In such a non-linear structure, users control the information flow and take subsequent action by voluntarily clicking and surfing. Following their line of thought, in the interaction process with the eBanking counterpart, users' skilfulness, perceived ease of use and completion of the banking task according to their goals illustrate control by eBanking customers.

With reference to Flow Theory, TAM and findings from the qualitative study, control has three major attributes in the eService context: skilfulness, ease of use and task completion.

- Skilfulness: the degree to which the user expects his or her proficiency in using eService
- Ease of use: the degree to which the user expects using the eService to be free of effort
- Task completion: the use of the eService platform for completion of certain tasks with specific goals.

The following section explains these attributes in detail.

Skilfulness

Skilfulness is one of the most important variables in Flow Theory (Csikszentmihalyi, 1990; Ghani and Deshpande, 1994; Koufaris, 2002; Novak et al., 1998, 2000; Trevino and Webster, 1992; Webster et al., 1993). In the current research, it is an attribute of control.

A skill is generally considered the ability or talent of an individual to perform a task well. It is an important factor affecting flow experience, as suggested by Csikszentmihalyi (1975, 1990). In a CME, Novak et al. (2000) believe that skill represents the online users' capability for action, i.e., skilfulness, during the online navigation.

There are various factors affecting users' skilfulness. Novak et al. (2000) highlight that the absolute length of time an individual has been online exerts a

positive influence on skill, which in turn positively influences his or her ability to experience flow in the Internet environment.

However, from the users' perspective, it is their own perception and judgment of their capability to use the computer and the relevant applications. Thus, not only are the skill and skilfulness concerns, but users' perception of what they can do with the skills they possess and how skilful they are is also important. For the current research, skilfulness is defined as an e-Service user's own judgment of his or her capabilities for using eBanking. A consumer's skilfulness at using the Internet reflects his or her control over online actions.

This definition is similar to the concept of computer self-efficacy (Compeau and Higgins, 1995). Computer self-efficacy refers to an individual's belief in his or her capability to perform certain computer tasks. A perception of self-efficacy is formed through a gradual and dynamic weighting, integration and evaluation of previous experiences of using different computer applications. Several studies (Burkhardt and Brass, 1990; Gist et al., 1989; Hill et al., 1986; Webster and Martocchio, 1992) have examined the relationship between self-efficacy and technology adoption. These studies found evidence in the relationship between self-efficacy and the adoption of high-technology products (Hill et al., 1986),

technology innovations (Burkhardt and Brass, 1990), and performance in software training (Gist et al., 1989; Webster and Martocchio, 1992; 1993).

Ease of Use

Researchers have similar conceptions about ease of use. Davis (1989) defines perceived ease of use as the extent to which users believe that using a particular technology will be effortless. Philips et al. (1994) define perceived ease of use as the degree to which the prospective adopter expects the new technology adopted to be free of effort regarding its transfer and utilisation. As "effort" is a finite resource a person allocates to various activities for which he or she is responsible, an application which is perceived as easy to use (can be used with less effort or no effort) is more likely to be accepted by users. Originally, ease of use is an important construct of the well-adopted TAM.

Ease of use, control and TAM. TAM is specifically tailored for modelling user acceptance of IT and relevant applications. It adopts the belief-attitude-intention-behaviour relationship to explain and predict technology acceptance. It was developed by Davis (1986) using Theory of Reasoned Action and Theory of Planned Behaviour as the theoretical foundation. TAM is also a valuable tool for predicting attitudes, satisfaction, and usage from beliefs and external variables (Al-Gahtani and King, 1999).

The goal of the model is to provide an explanation of the determinants of computer acceptance by tracing the impact of the user's internal beliefs and attitudes on his or her usage behaviour and how these internal beliefs and attitudes are, in turn, influenced by various external factors. Acceptance of a technology is defined as users' decisions about how and when to use that technology (Davis, 1989). By applying this concept to the current research, it implies the determination and control exercised by users to the use of eServices.

Empirical studies of TAM have found that IT usage depends on two internal beliefs: perceived ease of use and perceived usefulness of the system (Davis, 1989; Mathieson, 1991). Davis (1989) argues that perceived ease of use has a positive impact on perceived usefulness, which has a direct impact on attitude toward usage. TAM has been applied to explain an individual's adoption and usage of computer tools and systems such as word processing, spreadsheets, email, voice mail, and Intranet systems (Adams, Nelson and Todd, 1992; Chau, 1996; Horton, Buck, Waterson and Clegg, 2001; Igbaria, Iivari and Maragahh, 1995; Mathieson, 1991; Straub, Limayem and Karahanna-Evaristo, 1995).

Although this model has not been validated for explaining eService, there are some studies that have supported the use of TAM in the WWW context (Gefen, Karahanna and Straub, 2003; Hsu and Chiu, 2004; Lederer, Maupin, Sena and

Zhuang, 2000). Using a TAM variable, ease of use, to explain eService encounter satisfaction constitutes a good and meaningful first trial in marketing research.

Ease of use in the eService context. Specific to online service, Lederer et al. (2000) stated ease of use consists of determinants including easy to use, easy to read, using understandable terms, able to link to a search for related information and easy to return to the previous page or jump to the next page. When eBanking customers perceive websites as being easy to use, they can more easily and efficiently obtain the desired performance. It is argued that for goal-directed users, ease of use of eBanking is even more important as users aim to achieve the goal, i.e., complete the financial tasks, with minimal or no effort by using eBanking. Thus, it is logical to believe that ease of use is essentially an attribute of control and it contributes to eService encounter satisfaction.

For the current research, ease of use is defined as the degree to which a user believes that using eBanking is free of effort. Users with high perceived skilfulness should also perceive ease of use of eBanking. It is an attribute of control.

Task Completion in the Online Environment

Task completion is actually a neglected research issue in eService. Some research, such as Kim (2002), Francis and White (2004), Ryan and Valverde (2005), and De Kervenoael, Soopramanien, Elms and Hallsworth (2006), mention this issue but do not go into detail. However, task completion is important in self-service and the eService context, as it represents the outcome of a customer-eService provider interaction. It also implies the generation of returns and benefits for both eService customers and the eService providers.

Task completion and task management are key issues in Web management today. Task management is based on the idea that customers should be able to complete the tasks as quickly and simply as possible on the website. It measures the success of a website by looking at how quickly and easily the customers can complete the tasks, i.e., task completion.

It is interesting to explain that the concept of task completion is in contrast with the measurement of website popularity. Traditionally, page impression is used as the quantitative measurement of the popularity of a website. From the "task completion" point of view, it is argued that the more page impressions there are, the more frustrated customers become. This argument is based on the assumption that customers should complete their tasks with the minimum number of page

impressions. More search behaviour and a higher number of visits of different pages on a website mean the navigation is confusing and users are forced to search more. With better task management by eService providers, the number of impressions should be low and thus should give a better quality of customer experience.

Task completion in the eService context. Users/customers of eBanking tend to use eBanking services to the extent that they believe they will help them complete their banking task or even expect a better outcome. They wish to find and use the contents and services in the shortest possible time-span and evaluate them according to instrumental decision-criteria. They also expect some financial benefits after the completion of a banking transaction after they serve themselves with eBanking. It also means that customers are capable of doing what they need to do by themselves, i.e., they are in control. They will perceive satisfaction in the process and feel satisfied at the outcome, i.e., eService encounter satisfaction.

The service providers also benefit from online task completion by users. These benefits include monetary return, customer retention and customer satisfaction. More tasks completed online mean more successful eService.

For the current research, as customers/users of eBanking are goal-directed, it is important to help them to complete their tasks simply and easily for their goal achievement. Task completion is an attribute of customer/user control.

Control, eService Encounter Satisfaction and Dependency

To conclude, in the eService context, control is a construct that is cognitive-intrinsic in nature, with the attributes of skilfulness, ease of use and task completion.

Novak et al. (2000) support the notion that control during Web interaction leads to flow experience. For the current research, it is argued that once users have control in the process of eBanking interaction (i.e., they are skilful in completing the banking task via the eBanking platform with minimum effort), their eService encounter satisfaction will emerge.

Control gives users more opportunities to make their own choices. With the appropriate use of eService, users become very active in the service process and achieve effective outcomes. Once they get used to control in the encounter process with the eService provider, they will depend on eService as the major interaction option. It is then logical to believe that control contributes to eService dependency.

Involvement as an Antecedent of eService Encounter Satisfaction and Dependency

The concept of involvement is well researched in marketing and consumer behaviour literature. However, definitions of it are diverse, and no consensus regarding its definition and conceptualisation has been reached (Garlin and McGuiggan, 1999; Andrews et al., 1990). It is accepted that the understanding and application of involvement are contextual-related. Thus the definition in the current research should be further developed or modified, with reference to previous research and literature.

In general, involvement can be defined as personal relevance of a stimulus or situation. Krugman (1965) viewed involvement as the experiences, connections or personal references between an individual and a product or issue. Mitchell (1979, 1981), Bloch (1982) and Andrews et al. (1990) define involvement as the internal state that indicates the amount of arousal or interest invoked by a particular stimulus or situation. Zaichkowsky (1985) defined involvement as a person's perceived relevance of an object based on inherent needs, values and interests. Such a personal relevance conceptualisation of involvement helps to further explore its attributes: interest and attention.

Interest

Celsi and Olson (1988) focus on the subjective nature of involvement by emphasising perceived personal relevance as the essential characteristic of involvement. They argue that an individual may have "ongoing" involvement with an activity or product and "felt" involvement at a particular moment while participating in a related activity or purchasing a related product. For example, when an individual is confronted by a banner advertisement on a website, information stored in memory is activated, creating a motivational state, which leads to cognitive behaviour such as clicking the banner, going to the advertiser's website, and then giving attention to the advertisement and expending effort in comprehending the message.

In such a situation in the Internet context, whether consumers will visit a website of particular interest or not depends on their ongoing involvement, i.e., their long-term interest, and the "felt involvement" with the current situation. Sources of felt involvement are relevant to physical and social aspects of the environment or situation and the intrinsic characteristics of the individual.

Celsi and Olson (1988) refer to ongoing involvement as "intrinsic sources of personal relevance" and factors in the immediate environment as "situational sources of personal relevance".

Similarly, Schiefele (1999) distinguishes two forms of interest, namely, personal interest and situational interest. Personal interest, sometimes referred to as topic interest, is stable over the long term. Situational interest is the temporary state that is elicited by specific features of context or situation.

Interest has been shown to affect comprehension (Baldwin et al., 1985), recall (Schiefele and Krapp, 1996), navigation patterns through the website (Lawless and Kulikowich, 1998) and depth of information processing (Schiefele, 1999).

Attention

Attention is also considered an indication of involvement. Intensity of involvement is directly related to the seriousness of the consequence of an issue, which in turn may vary on the basis of personal relevance. Thus, an increase in involvement or personal relevance can be reflected by a higher level of attention. Greenwald and Leavitt (1984) distinguish four levels of audience involvement: pre-attention, focal attention, comprehension, and elaboration.

Buchholz and Smith (1991) found that audiences in the high involvement condition have maximised attention to the advertisement and the amount of brand processing. In Lord and Burnkrant's (1993) study, programmme, involvement is

assessed by measuring the response time. Longer response times indicate that more attention is paid to the primary task, i.e., viewing the programme.

Involvement in the Online Environment

Flow comprises the total involvement of the actor with the activity (Mannell, Zuzanek and Larson, 1988; Lutz and Guiry, 1994; Csikszentmihalyi, 1975). During the process of online navigation, users/customers experience flow for their acute involvement in their interaction with the Web as a prerequisite of flow in the process of online navigation (Hoffman and Novak, 1996).

The Internet, by its nature, requires user involvement, as it is an active medium that requires the active participation of users in the communication process. When users are online, navigating the Web for relevant information, reading and digesting the information, they take certain action based on the information reviewed. All these activities require active involvement of users, as they have to participate in the whole process. Cleary (1999) believes that the interactive nature of the Internet makes it a more "involving" medium than traditional mass media.

In line with the concept of personal relevance while defining involvement, Levy and Windahl (1985) define involvement as the degree of audience perception of the connection between themselves and the media content. Such personal relevance represents the involvement in the communication process and contributes

to the flow experience. As Ghani and Deshpande (1994) pointed out, the total concentration on an activity and the enjoyment which one derives are the key characteristics of flow. The total concentration represents the full attention and deep involvement status of the users in an Internet environment.

The Internet is a medium with an interactive nature, customers' participatory experience, i.e., involvement in the interactive online communication process is important to indicate their eService experience and the encounter process between customers and eService provider.

Involvement in eService

In an eBanking context, online interactive activities, such as the searching of financially related information, conducting bank transactions, or trading of shares, need customers' active involvement. It is then logical to argue that involvement is an important independent construct to reflect the experience of customers contributing to eService encounter satisfaction and eService dependency. For the current research, involvement is cognitive-intrinsic in nature. It refers to the psychological state of users deeply concentrating on the online navigation with a high degree of interest.

eBanking is an activity with a high degree of personal relevancy, as it is directly related to monetary and financial matters. Thus customers will pay full attention when they visit the eBanking site for information and all account-related

information. eBanking customers also show their personal preference and interest in using eBanking as an interaction option with their bank. Involvement is also in line with utilitarianism and the goal-directed behaviour of eBanking customers. Consequently, such absolute involvement in eService activities might contribute to positive outcome of satisfaction. Following the logic of Flow Theory, the deeper the users are involved in the interactive communication process in the computer-mediated environment, the easier it is for them to be satisfied.

With reference to relevant conceptualisation, Flow Theory and findings from the qualitative study, involvement has two major attributes in the eService context: intrinsic interest and navigation. The following section explains these attributes in detail.

Intrinsic Interest in eService

Research in human-computer interaction (HCI) has long asserted that human factors are the key to successful technological devices, as it is the users/customers that use the technology and determine its usefulness and successfulness. Users' continuation of using eServices depends on whether they meet their needs, motives and interest. Such intrinsic interest is characterised by pleasure from performing the behaviour, the process, and achievement of goals.

Intrinsic interest is important, as it is also associated with three universal psychological needs of human beings: autonomy, competence, and social relatedness (Deci and Ryan, 2000; Gagné and Deci, 2005).

Intrinsically motivated behaviour is perceived as behaviour freely engaged in and which the individual finds interesting and derives spontaneous satisfaction and enjoyment from (Deci, 1971; Lepper et al., 1973; Gagné and Deci, 2005). When people are intrinsically motivated, they tend to be more aware of a wide spectrum of phenomena. They also pay careful attention to complexities, inconsistencies, novel events and unexpected possibilities (Beswick, 2007).

In the current research, intrinsic interest is an attribute of involvement. As eBanking is one of the service options offered by banks, users/customers should be intrinsically interested in order to use it as the preferred transaction and communication medium with the bank. Such a situation is supported by the fact that some bank customers are not interested in using eBanking services. They prefer to use other channels to obtain banking services for demographic and psychological reasons.

During the browsing process, with intrinsic interest, users navigate freely to click on the hyperlinks, gather and process information, and have an appreciation of the services, all of which may lead to a greater depth of involvement and

consequently experience of eService encounter satisfaction and eService dependency. According to Deci and Ryan (1985), intrinsic interest is based on an individual's need to be competent, self-determining, and for "internal rewards". For the current research, such Internet reward is the eService encounter satisfaction.

Intrinsic interest is defined as the psychological state of users/customers that internally motivates them to engage and interests them in engaging in the browsing and interacting process with the eBanking website for their own sake.

Navigation in eService

In the eBanking context, most users are heavily involved, as they are goal-directed, aiming to complete certain tasks, such as gathering financial information or completing transactions. They like to achieve their goals with minimal effort and maximum efficiency. Thus, in the interaction process via the eBanking platform, it is also important for customers to have freedom and ease to navigate.

Although various literature has been reviewed, there is a lack of research on navigation of websites, especially from the Internet users' behaviour perspective. Most of the discussions focus on the technical aspect of navigation. From the technical point of view, navigation is one of the most critical aspects of website

development. A navigation scheme represents the table of contents of a website, and it is the path to information acquisition and goal accomplishment. A website's navigation scheme and features should allow users to find and access information and achieve goals effectively and efficiently

While discussing the changes in the UK banking sector in relation to eBanking, Fayawardhena and Foley (2000) define navigation as the hypertext connection of the multimedia content. The connection includes elements such as homepage hyperlinks, number of Web pages, number of hyperlinks, hyperlink encoding and personal contact possibilities. These in turn have been found to influence user satisfaction (Gatian, 1994; Doll, Raghunathan, Lim and Gupta, 1995). These functional views focus on the technicality of the navigation process. However, from the Internet users' perspective, users aim for an easy way to navigate freely to find something from the Internet and the relevant website.

From the behavioural perspective, navigation can be described as a series of actions including the user clicking on the icon or typing an address into the Web browser address bar, waiting until something appears on the computer screen, and then starting to surf a specific website. The user will then continue to click on the hyperlinks and navigate to where he or she wants to go. It is thus very important to

let users have perceived smoothness and ease of clicking and surfing. In the navigation process, each successive click should move users in the direction of goal achievement and consequently obtain satisfaction for successful navigation.

Web usability research reveals that easy navigation is critical to the success of a website (Kanerva, Keeker, Risden, Schuh and Czerwinski, 1998). A high degree of navigation allows customers to navigate freely within the site. The goal of any website should be to offer users a clear and simple way to access all pages in a site. For example, having "homepage" and hyperlinks of main categories (such as different categories in Amazon.com) on each page means it is easy for customers to find the location they want to go to. Also, adapting websites to users' cognitive styles and abilities leads to better navigational performance and easier information access (Larson and Czerwinski, 1998). Positive correlations between navigational performance and user satisfaction were also identified (Otter and Johnson, 2000; Smith, 1996).

Hoffman and Novak (1996) define navigation as the process of self-directed movement through the website, involving nonlinear search and retrieval methods that permit greater freedom of choice. By emphasis on the users' goal-oriented nature of using eBanking and the interactive nature of eBanking, navigation is defined as the

process of self-directed and concentrated movement of users in the website to explore in an interactive environment for achievement of goals or tasks.

Involvement, eService Encounter Satisfaction and Dependency

To conclude, in the eService context, involvement in the interaction process is a construct that is cognitive-intrinsic in nature. It has the attributes of intrinsic interest and navigation.

Csikszentmihalyi (1975), Ghani, Supnick and Rooney (1991), and Ghani and Deshpande (1994) highlight total involvement in an activity as the key factor leading to flow experience. As satisfaction is a characteristic of flow experience, it is argued that customer involvement in the eBanking interaction leads to eService encounter satisfaction.

According to Grant (1996), the nature of dependency is goal-related. Once customers are heavily involved in eService to achieve their goals, then they will be eService dependent.

Summary

In this chapter, all the constructs in the theoretical model are reviewed. By using Flow Theory as the theoretical foundation, together with other models and academic research, concepts related to Internet communication, including interactivity, control and involvement, are discussed thoroughly. They are the

constructs leading to eService dependency and eService encounter satisfaction. It also highlights that eService dependency and eService encounter satisfaction contribute to overall satisfaction with and loyalty to the principal service providers, i.e., the principal bank offering eBanking services in the current research.

Although each construct has been researched extensively in the past, these research investigations are independent of each other. Thus the theoretical links among these constructs have to be researched and clarified carefully. For each construct, the attributes are also identified specifically for the context of eService.

The relationships between constructs are also discussed, and this helps with the formulation of research hypotheses and the development of the research model for the quantitative validation that follows. The research model, research hypotheses, quantitative validation process and findings are discussed in Chapter 3 and Chapter 6 respectively.

CHAPTER 3

CONCEPTUAL DEVELOPMENT

In Chapter 2, relevant literature and research related to customer behaviour on eService and eBanking are explored and discussed. In this chapter, the conceptual development process is discussed and justified. A conceptual model is proposed indicating hypothesised associations among the constructs of the current research. The specific constructs comprising the model are interactivity, control, involvement, eService dependency, eService encounter satisfaction, overall satisfaction and loyalty. Some of the constructs, including control, involvement, satisfaction and loyalty, have been examined extensively in the traditional marketing context. However, in the eService context, the meanings of these well researched constructs are re-defined. Their impacts on service encounter, satisfaction and loyalty should also be further researched. Similarly, interactivity is not a new construct in the traditional communication context, but it should be re-defined and further studied in the eService context. As supported by the expert interviews with eBankers and the focus group interviews with eBanking customers, these three exogenous constructs are identified as important factors affecting eService dependency and eService encounter satisfaction in eBanking. Although some electronic commerce or marketing research incorporates these constructs into comprehensive models (such as Hoffman and

Novak (1996) and Shankar et al. (2003)), no previous research isolates and focuses on these consumer psychology constructs to develop an eService model. Such a focusing approach identifies the most important constructs that influence consumer behaviour and examines their impacts on specific and important endogenous constructs. From a managerial perspective, practitioners will be able to obtain a clear understanding on a few constructs and their significance. Thus they are able to formulate effective marketing strategy focusing on these specific constructs.

The model also incorporates a construct related to the user behaviour of computer and Internet – dependency. This construct, eService dependency, is newly identified for the current research, with support from the findings from expert interviews with eBankers. According to the findings from expert interviews, it is found that eBanking customers are more dependent on eBanking services when they are able to control and get involved in the interaction process with the eBanking system with a high degree of perceived interactivity. This newly identified construct, if proven to be significant, will help to explain the increasing usage rate and the habitual usage behaviour of customers using eBanking services.

Based on the above, twelve research hypotheses are formulated. They are further explained in the following sections.

The Conceptual Framework

This study is guided by a model that proposes multiple influences on relationship outcomes of eService usage. The key variables of interest in the model are interactivity, control and involvement, derived from Flow Theory. These variables characterize eBanking customers' perceptions of the interaction with service providers by using eBanking services via the Internet, with the outcomes of eService dependency and eService encounter satisfaction. The accumulation of the positive experience of eService dependency and eService encounter satisfaction contribute to overall satisfaction as well as loyalty to the service provider.

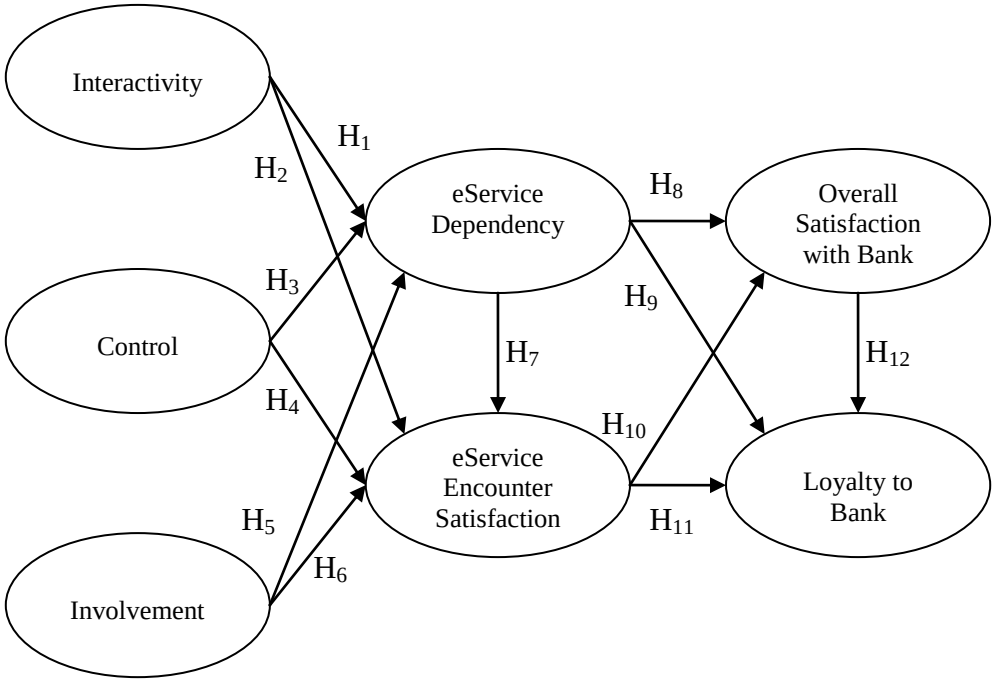


Figure 3.1 The Conceptual Framework

Flow Theory as the Conceptual Foundation

Csikszentmihalyi (1975) introduced the original concept of flow. It is defined as the holistic experience that people have when they act with total involvement.

Flow Theory has been proposed by several researchers as an important foundation for understanding consumer behaviour on the internet. Hoffman and Novak (1996) conceptualize flow on the Internet as a cognitive state experienced during navigation that is determined by users' skill and control, attention and enhanced by interactivity characterized by a seamless sequence of responses. Hsu and Lu (2004) describe flow as an extremely enjoyable experience with total involvement, enjoyment, control, concentration and intrinsic interest. Similarly, Koufaris (2002), Moneta and Csikszentmihalyi (1996), and Novak et al. (2000) consider flow as a subjective computer-mediated communication (CMC) experience of interactivity, involvement, motivation, efficiency and enjoyment.

By using Flow Theory as the conceptual foundation, together with the findings from relevant research (such as Koufaris, 2002; Shankar et al., 2003), the expert interviews and eBanking customer focus group study, interactivity, control and involvement are identified as constructs representing the perception of eBanking customers in the interaction process with the eBanking system. It is argued that these three constructs might contribute to eService dependency, satisfaction and loyalty,

which are the relationship outcomes of eService. Figure 3.1 is the proposed conceptual framework for further testing.

It is believed that interactivity, control and involvement are the three major Internet communication attributes motivating customers to use eServices. They are essential elements to understand eService usage and effects but have not yet received sufficient attention. Thus they are also considered as the key constructs carrying potential causal effects to relationship outcome. In the framework, eService dependency and eService encounter satisfaction describe the outcome of using eBanking services, while overall satisfaction and loyalty to the service providers describe the cumulative outcome of eService dependency and eService encounter satisfaction.

This section provides a brief explanation of the conceptual framework and the research context. In the following section, the two intermediating constructs – eService dependency and eService encounter satisfaction – will be introduced and explained first for their relative novelty and importance in Internet marketing and eService. Following on from that, there are sections which further elaborate and justify the hypothetical relationship between constructs in the conceptual framework. Twelve hypotheses are also proposed accordingly.

Introducing eService Dependency and eService Encounter Satisfaction

Both eService dependency and eService encounter satisfaction are considered as the intermediating constructs in the framework. They are relatively new constructs in Internet marketing research, especially the former one, thus a more detail elaboration and justification is provided in the following sections before a further discussion on their relationships with other constructs.

In the current model, eService dependency is considered as the high tendency of eBanking customers to use eBanking as the platform for interaction and transaction to meet the action oriented goals of their banking behaviour. eService encounter satisfaction is considered as the outcome of customer-eBanking interaction with pleasurable experience and fulfilment of goals.

eService Dependency

Dependency on eBanking services is the concept raised by an eBanker during expert interview. Further discussion has been brought out in expert interviews with other eBankers and also focus group interviews with eBanking customers. Chapter 5 (Qualitative Data Collection, Findings and Analysis) has a detailed discussion on eBankers' and eBanking customers' views on eService dependency. They have different views regarding this concept.

Although eService dependency is a new concept brought out by the current research, the concept of dependency can be found in media as well as communication technology research.

People's dependency focuses on goals and needs (Grant et al., 1998). In media research, Ball-Rokeach and DeFleur (1976) illustrate dependency as the relationship between media and the audience. Their media dependency theory states that the more dependent an individual is on the media to achieve goals, the more significant the media becomes to the individual. Rubin (1982) proposes that media use can lead to media dependency. Ball-Rokeach et al. (1984) discuss individual-level dependency as a relationship in which the capacity of individuals to attain their goals is contingent upon the resources of the media system. Such dependencies are conceived along three general dimensions – play, orientation and understanding (Ball-Rokeach, 1985; Grant, Guthrie and Ball-Rokeach, 1991) – in which, action orientation dependency relations concern the making of behaviour decisions and actions. Their conceptualization is crystallized as the individual media dependency (IMD) theory.

Loges (1994) demonstrates that the conceptualization of dependency is valid across media. It is then reasonable to explain Internet dependency as a relation reflecting users' reliance on the Internet to achieve goals.

Following the beliefs of IMD and Loges (1994), eBanking customers are seeking as well as using the resources from the eBanking website. In this process, eBanking customers are getting involved in, being interactive with and controlling the interaction with the eBanking website in order to fulfil their financial goals, thus their dependency on eService will then be nurtured. Their eService dependency might also lead to overall satisfaction and loyalty to the principal bank.

eService Encounter Satisfaction

In marketing literature, satisfaction has been considered a complex emotional response of customers' experience with a product or service (Oliver, 1981). It is attained when product or service performance exceeds expectations (Jacobs, 1995; Oliver, 1980), or customers' post-purchase evaluation of a product or service (Hunt, 1977). In communication literature, Hecht (1978a, 1978b) conceptualized and examined satisfaction as an affective communication consequence of fulfilling expectations between interactants through interaction. In short, satisfaction is the concept illustrating the positive response or outcome of an interaction between two parties.

In the current conceptual framework, customer satisfaction is further differentiated into two distinctive levels, namely eService encounter satisfaction at service level and overall satisfaction with the principal bank at corporate level.

eService encounter satisfaction is transaction-specific and overall satisfaction is relationship-specific. Service encounter satisfaction is defined as the consumer's satisfaction with a discrete service encounter, while overall satisfaction with a particular organisation is an aggregate of all previous encounter satisfaction of the consumer (Jones and Suh, 2000; Bitner and Hubbert, 1994).

eService encounters are service encounters enabled by CMC. The satisfaction the customer derives from an interaction with eService is known as eService encounter satisfaction.

Customers' evaluation of the interaction dimensions suggests that communication during the encounters is likely to be heavily weighted by consumers when evaluating service encounters (Smith, Bolton and Wagner, 1999). The current eService research explores how the specific Internet communication attributes (i.e. the interaction dimensions in Smith et al.'s (1999) term) contribute to eService encounter satisfaction, and also how eService encounter satisfaction contributes to overall satisfaction and loyalty to principal banks.

Based on the findings from the eBankers' expert interviews and eBanking customers' focus group study, eService improves the service process by offering interactive communication with service providers. By using eService, customers also perceive that they are able to control as well as be involved in the interaction process

with the service provider. Such smooth encountering process will positively influence eService encounter satisfaction. In the long run, eService encounter satisfaction might contribute to overall satisfaction and loyalty to the principal banks.

In this section, the two constructs, eService dependency and eService encounter satisfaction, are elaborated and their relationships with other constructs are introduced. In the following sections, the hypothetical relationships between constructs are justified and hypotheses proposed.

Interactivity, eService Dependency and eService Encounter Satisfaction

Interactivity is described as responsiveness (Rafaeli, 1988). It is a characteristic of the modern media and communication (Heeter, 1989). Gutek, Bikson and Mankin (1984), Huber (1990), Rice and Shook (1988), and Sproul and Kiesler (1986) find that communication using CMC technologies, such as electronic mail, increase the frequency of interaction, encourage the development of new contacts, and consequently enhance communication and productivity. Similarly, being enabled by CMC technologies, eService is a service and interaction format that can maximise the possibility for customers to interact easily with the service providers, whereas other service formats cannot match this.

The following two sections – *Interactivity-eService Dependency Relation* and *Interactivity-eService Encounter Satisfaction Relation* – discuss and justify the

hypothetical relationship between interactivity, eService dependency and eService encounter satisfaction, respectively. Their relationships are substantiated by relevant literature, research, or findings from expert interviews with eBankers and focus group study with eBanking customers.[1]

Interactivity-eService Dependency Relation

All the above academic views help to establish interactivity as a critical characteristic of Internet-enabled eService. High degree of interactivity differentiates eService from other service interaction options in financial services. With reference to the findings from the eBanker expert interviews and eBanking customer focus group study, such differentiation shows that eService customers prefer the use of eService as the means of interaction because of its attributes of two-way communication, synchronous responsiveness and personalisation. All these attributes contribute to the dependency relationship between eService users and eService.

Empirical research demonstrates that people have dependency relationships with media (Ball-Rokeach et al., 1984; Hirschburg, Dillman and Ball-Rokeach, 1986). A logical extension of the IMD theory is that customers develop dependencies on the Internet as a medium and eService as a new service format. Dependency relation is a measure of the relationship between the customer and the Internet.

[1] The details of the findings from the expert interviews and focus group study on interactivity can be found in sections *Interactivity: Enhancement of eBanking Experience* and *Interactivity as the Major Characteristics of Customer-eBanking Interaction*, in Chapter 5 of the thesis.

The phenomenon of dependency is well illustrated by the eBanking cases of eTrading, online bill payment and online purchase of travel insurance.[2] The common characteristics of these eBanking services are: responsiveness, including the offering of the latest information upon request, the synchronous nature of interaction between customers and the eBanking system, and instant confirmation and completion of the transaction. These characteristics contribute to the development of preference of eBanking customers as well as their tendency of using eBanking services for their achievement of financial goals.

The phenomenon of dependency is also well described by eBankers as well as eBanking customers during the interviews. An eBanker (eB2) claims that eBanking customers have a large number of interactions with eBanking via the Internet. The volume, frequency and constancy of visiting eBanking sites illustrate customers' dependency on eServices. Another eBanker (eB3) supports that personalised service will enhance customers' usage experience and their dependency. Two eBankers (eB3 and eB4) think that instant and rich information with no delay builds up dependency of customers. eBankers also use "habitual usage of eBanking" or "habitual behaviour" frequently to describe customers' eBanking behaviour. Such description is actually an indication of dependency.

[2] The details of the cases on online billing payment, online purchase of travel insurance and eTrading can be found in the sections *Bill Payment Illustrates the Process of Building eService Encounter Satisfaction*, *Travel Insurance Illustrates the Wider Acceptance of eBanking* and *eTrading as an Illustration of Push Factor*, Chapter 5 in the thesis.

According to Steuer's (1992) tri-component conceptualization, interactivity occurs when the information in the site loads rapidly, when the site responds quickly to clicks, and when customers are interested in interacting with the website. Palmer (2002) further extends its scope by incorporating customization as its attributes in the interaction process. To incorporate views from academia and practitioners on eService and interactivity, there are certain conditions for eBanking to fulfil – quick response, personalisation and rich information. It is believed that these attributes of interactivity contribute to eService dependency.

As indicated by current eBanking customers, they expect and agree that eBanking services should have the characteristics of interactivity, two-way communication, should be synchronous, responsive, personalised interaction and information-rich. It is obvious that these characteristics are the resources contributing to the achievement of action orientation goals of eBanking customers. Thus, there is a high possibility that a dependency relation will be developed between eService users and eService. The following hypothesis between interactivity and eService dependency is then proposed:

H_1 *Interactivity has a direct positive effect on eBanking service dependency*

Interactivity-eService Encounter Satisfaction Relation

Interactivity represents the extent to which the communicator and the audience respond to each other's communication need (Ha and James, 1998; Rafaeli, 1988; Fox, 2000; Levine et al., 2000; Newman et al., 2004).

Robb et al. (1997) propose that interactivity is the combination of rich content, active intelligence, and collaborative communications to create a compelling consumer experience, where encounter satisfaction should constitute such positive experience. Hoffman and Novak (1996) point out that in the state of Internet browsing, once an individual has a series of seamless interactions with the machine, enjoyment will ensue. Thus it is reasonable to say interactivity and eService encounter satisfaction has a positive correlation. If eService is highly interactive to users, then it should lead to encounter satisfaction.

In addition to the above academic views, eBankers and eBanking customers also have positive views towards the influence of interactivity on eService encounter satisfaction.

In general, eBankers believe that positive eBanking experience contributes to customers' encounter satisfaction. One eBanker (eB2) believes that interactivity is a core condition for maintaining favourable customer experience. He describes eBanking service adoption as an incremental process which shows the eService

encounter satisfaction of customers. In the adoption process, customers must be satisfied with various encounters in order to use the eBanking service continuously. These encounters include the initial visits to eBanking sites, getting familiar with the eBanking service, registration for the service, trial usage for information gathering, trial usage for transactions and then continuous usage of eBanking service for various purposes.

Another eBanker (eB3) uses online calculators and online bill payment as examples to support the positive influence of interactivity to service encounter satisfaction. Both online calculators and online bill payment operate in an interactive manner offering the latest, personalised information and instant responses to the customers. As customers can complete bill payment tasks instantly with low risk, it is effective to build up encounter satisfaction and habitual usage. All eBankers believe that interactivity has a positive impact on encounter satisfaction.

In the eyes of eBanking customers, eBanking is a platform offering information and services to achieve their financial goals – a resource-taking attitude for goal attainment. They expect and require, as reflected in the focus group discussion, eBanking service to be interactive. From their views, interactivity represents high accessibility to reliable and current banking information, highly responsive and smooth communication, instant completion of transactions, and

highly personalised interaction and services. All these attributes of eBanking services contribute to the positive encounter experience of eBanking customers.

According to views from academia, eBankers and customers, the following hypothesis is proposed:

H_2 *Interactivity has a direct positive effect on eBanking service encounter satisfaction*

Control, eService Dependency and eService Encounter Satisfaction

Control is a major concept in the theories of intrinsic motivation. These theories emphasize the seeking of control to actions and choices by individuals (deCharms, 1968; Deci, 1975, 1981; White, 1959). In a computer-mediated environment (CME), individuals have the potential to control their interaction with the medium and the web site (Nel, van Niekerk, Berthon and Davies, 1999), because they are in charge, determine the progress, explore and exit the interaction process (Trevino et al., 1992). Control is facilitated by the medium adapting to feedback from users, and also by providing explicit choices among alternatives (Webster et al., 1993).

According to Althaus and Tewksbury (2000), Internet has the structural features of an almost limitless capacity to store and transmit any kind of information, and ease for users to be able to track issues and events in much greater depth than in

other media. All these features lead to more control by the customers in the interaction and transaction process.

In line with the above analysis, customers have control over the interaction process, i.e. the actions and choices, with the eService provider. Their control and determination can be well illustrated by the input of instructions, the choice of different options and the surfing of the eService website. Thus a focus of the current research is to examine the impact of control on eService dependency and eService encounter satisfaction.

The following two sections – *Control-eService Dependency Relation* and *Control-eService Encounter Satisfaction Relation* – discuss and justify the hypothetical relationship between control, eService dependency and eService encounter satisfaction respectively. Their relationships are substantiated by relevant literature, research, or findings from expert interviews with eBankers and focus group study with eBanking customers.[3]

Control-eService Dependency Relation

Control is a positive subjective experience motivating an individual to perform an activity (Csikszentmihalyi, 1975). Such a high motivation to perform an activity will consequently lead to an increasing quantity of the activity. In the

[3] The details of the findings from the expert interview and focus group study on control can be found in sections *Pull Factors of eBanking Acceptance: Control* and *Control in the Customer-eBanking Interaction*, Chapter 5 of the thesis.

eService context, once customers experience control over the interaction with eBanking, they should have been motivated to use eBanking, instead of using other channels, to facilitate the achievement of their financial goals. This tendency becomes even more prominent when their skilfulness of using eBanking is getting high. It is then proposed that control contributes to eService dependency.

One eBanker (eB2) believes that a more user-friendly and powerful interface allows customers get used to and depend on eBanking to manage their accounts themselves. He quotes online bill payment as an example to show that customers control the bill payment process and adopt it as a habitual behaviour later on. He believes that customers' access to transaction capabilities and self-directed account management represent customers' self-control experience which leads to their dependency on eService. He highlights that customers have a growing preference to use self-service eBanking.

As mentioned by another eBanker (eB1), the adoption process of eBanking service in Hong Kong is now in the 'customary' phase, in which eBankers aim to build up customers' habit of using eBanking. Habitual usage actually represents the situation of dependency as described by eBanker eB2. Meanwhile, to build up dependency on eBanking service, usefulness, functionality and user-friendliness are

the conditions, according to eBankers eB2 and eB3. These conditions are considered as important attributes of customer control in the eService context.

In general, eBankers believe that once customers are skilful and experienced to use the Internet and related applications to manage daily life matters, they have a very high tendency to depend on eBanking. Although it is counter-intuitive to propose the positive impact of control on dependency, eBankers support the relationship between control and eService dependency.

For eBanking customers, they actively seek the latest information, instant responses and service from eBanking sites. They perceive eBanking sites as resources and they make use of them to manage their finance. It is found that eBanking customers have a strong sense that they are able to and have to control the interaction and transaction with eBanking.

As reflected in the focus group discussions, some of the participants (such as G7P5, G8P6 and G8P9) do not agree that their control of eBanking leads to dependency on eBanking services, while some of them (such as G7P1, G7P5 and G8P5) agree positively with their dependency. Meanwhile, there are participants showing that they get used to depending on eBanking because of their skilfulness to use it (such as G3P5, G3P6, G3P11, G4P2 and G4P4), its easiness to use (such as G3P1, G3P3, G3P6, G3P10, G4P1, G4P1, G4P2, G4P8 and G4P9), its usefulness

(such as G3P2, G3P3, G4P8 and G4P9), and its functionality for task completion (such as G3P1, G3P2, G3P6, G4P5, G4P6, G4P8 and G4P10).

It is believed then that eBanking empowers customers to control and eBanking customers are capable and prefer to control the eBanking process. Their views also show a relationship between control and dependency which is worth further examination and testing. Based on the preceding analysis, the following hypothesis is proposed:

H_3 *Control has a direct positive effect on eBanking service dependency.*

Control-eService Encounter Satisfaction Relation

Baronas and Louis (1988) confirm that information systems that provide more perceived control result in more positive user attitude and satisfaction. In line with the view of Ding, Verma and Iqbal (2007) regarding online services, an increasing number of bank customers are turning to eBanking services for a higher level of control and convenience; it is anticipated that control leads to customers' positive emotional responses and satisfaction (Klein, 2001). Self-service customers believe in and prefer control as a critical factor in the service process (Bateson, 1985; Dabholkar, 1996; Meuter and Bitner, 1998; Howard and Worboys, 2003). For the current research, it is therefore proposed that control contributes to eService encounter satisfaction.

All eBankers consider eBanking as an important tool to enhance customer satisfaction and loyalty. They highlight that smoothness of the eBanking process, self-completion of transactions, user-commands, freedom to navigate, easiness to use are the attributes of eBanking contributing to encounter satisfaction. Online bill payment and online purchase of travel insurance are two examples quoted by eBankers to show the positive impact of customer control on encounter satisfaction.

eBankers also point out that customers using eBanking are goal-oriented and functional-oriented. They aim for effective control in order to complete banking tasks. One eBanker (eB2) points out that in order to ensure customers are satisfied during the encounter, they must offer comprehensive functional eBanking to enable customers' self service and to get their banking tasks done. As described by the eBanker eB1, customers are more active now and want to take control. Following the views of eBankers, customer control might contribute to their encounter satisfaction in the eService context.

On the customers' side, control implies their greater responsibility in the eService interaction process. Thus customers' skilfulness to control effectively becomes a critical condition affecting their control. Users with more computer or Internet experience are thought to be more capable to control.

Control comes from Internet users' perception of their ability to successfully navigate through the web environment and perception of the Internet responses to their inputs (Novak et al., 2000). According to the experience shared by participants in the focus group, they are anxious when they first visit and interact with the eBanking service on the Internet. Later on, once they obtain a certain level of familiarity with the eBanking service through practice, the interaction process will become manageable. They will then become more freely to explore and to use the eBanking service i.e. to complete certain banking tasks online. Following the thoughts of the focus group participants (such as G3P11, G4P2 and G4P4), Internet skilfulness is an important attribute of control in the eService context. It also contributes to eService encounter satisfaction.

In line with Hoffman and Novak (1996), most of the focus group participants (15 out of 21 participants) claim that their eBanking usage is goal-oriented and they aim to complete the banking tasks quickly via eBanking. Task completion is considered as an indication of control. In addition to task completion, perceived ease of use and perceived usefulness are also raised by the participants as attributes of control. According to the focus group participants (such as G3P1, G3P2, G3P3, G3P6, G4P1, G4P4, G4P8 and G4P9), ease of use and usefulness are important for their continuous usage of eBanking. Following the thoughts of participants and Davis'

(1993) Technology Acceptance Model, ease of use and usefulness are considered as attributes of control. They all affect encounter satisfaction.

In general, customers perceive that the eService system is manageable with their Internet skills. They are also confident to control it and they appreciate the benefits and usefulness of control. Based on the preceding analysis, the following hypothesis is proposed:

H_4 *Control has a direct positive effect on eBanking service encounter satisfaction.*

Involvement, eService Dependency and eService Encounter Satisfaction

Involvement is vital for explaining the significant role of active interactants in communication (Rubin, 1998). It is considered as personal relevance of the object to the individual (Zaichkowsky, 1985), or the pre-existing/enduring relationship between individual and object (Andrews et al., 1990; Houston and Rothschild, 1978).

In the communication process, involvement stresses the interaction between audiences and media, where audiences play the active role of participation during exposure and interaction (Rubin and Perse, 1987; Rubin and Step, 1997). It is a central construct in communication effects (Levy and Windahl, 1985; Perse, 1990).

In the eService context, while exposure to website content reflects the temporal aspect of Internet communication, involvement shows the psychological state of the participatory experience of eService users. It provides a good

measurement of psychological participatory experience during engagement with eService.

According to Rubin and Windahl (1986) and Grant et al. (1991), message processing, interpretation and involvement in communication leads to certain effects or consequences, such as attitude change. Similarly, involvement in eService, such as navigation with deep concentration in the eService website, might lead to certain effects, such as eService dependency and encounter satisfaction. The current research examines how involvement in eBanking services leads to eService dependency as well as eService encounter satisfaction.

The following two sections – *Involvement-eService Dependency Relation* and *Involvement-eService Encounter Satisfaction Relation* – discuss and justify the hypothetical relationship between involvement, eService dependency and eService encounter satisfaction, respectively. Their relationships are substantiated by relevant literature, research, or findings from expert interviews with eBankers and focus group study with eBanking customers.[4]

[4] The details of the findings from the expert interview and focus group study on involvement can be found in sections *Involvement in eBanking Activity* and *Involvement of Customers during Customer-eBanking Interaction*, Chapter 5 of the thesis.

Involvement-eService Dependency Relation

Grant et al. (1991) consider that involvement and participation are necessary for an individual to develop a dependency relationship with a medium. Ball-Rokeach (1998), Rubin (1998) and Sun, Rubin and Haridakis (2008) assert that involvement, being a motivated activity, is an antecedent of dependency. Meanwhile, both media dependency theory and uses and gratification theory support the proposition that involvement is an antecedent of media dependency.

By its very nature, the behaviour of using the Internet presupposes a high degree of user involvement, no matter what activities are being conducted. More importantly, eBanking is a goal-directed behaviour as customers aim to complete certain tasks in the eBanking site. Thus the interaction process and navigation process will be very involving for task completion and also for risk minimisation. The interactive nature of the Internet also makes the Internet itself more involving than non-interactive media. Users are generally observed to be in a "lean forward" mode online, as opposed to a "lean back" mode during exposure to traditional media messages (Cleary, 1999).

Because such an involving experience is attention-catching, enjoyable and interesting, the current research proposes that involvement in eService interaction

contributes positively to eService dependency. It means that eBanking customers will tend to use eBanking to meet their action orientation goals of banking.

According to one eBanker's (eB3) opinion, eBanking is a good channel to get customers involved in and responsible for the service process. Customers' eBanking participatory experience probably contributes to their encounter satisfaction and dependency. Online bill payment is used as a stimulator to attract customers' usage of eBanking. It is an application to transform eBanking customers from simply "online information seekers" into "online transaction executors". Another eBanker (eB2) even believes that customers will eventually handle all banking tasks with eBanking. Such transformation implies that customers are to be more involved in the eBanking interaction process and finally adopt and depend on eBanking as the medium for communication.

eBankers (eB2 and eB3) believe that the active participation of customers represents their high involvement in the eBanking process. In such a high involvement context, customer dependency will be nurtured if their goals are achieved. eBankers also observe that eBanking customers are experienced in using the Internet and relevant applications in their daily life. Their experience in and integration with technology imply their high degree of involvement and dependency in using eServices.

According to the views of eBankers (eB1, eB2 and eB3), free and easy to navigate are considered as the characteristics of user involvement in eBanking services. Smoothness and easiness during navigation should contribute to encounter satisfaction. Such positive navigation experience should also lead to customers' continuous usage of eService i.e. dependency on eService.

eTrading is quoted by eBankers as an eBanking activity that requires a high degree of involvement. Customers are deeply concentrated, together with their experience of smoothness of navigation and easiness of usage in the transaction process. All these are considered having a positive impact on eService dependency and eService encounter satisfaction.

From the perspective of eBanking customers, they also believe that they are getting more involved in managing their account via eBanking. They think that eBanking is an effective platform for interaction and account management. They also show that they are interested to use eBanking and enjoy the navigation and interaction process.

In the eService context, involvement represents the active participation of customers in interaction with eBanking, personal relevancy and importance of eBanking to them, extensive use of eBanking to manage their assets and financial resources. eBanking customers (G5P2, G5P4, G5P11, G6P1, G6P8 and G6P10)

share that they check their accounts frequently and conduct transactions consciously and carefully via eBanking. eBanking customers (G5P1, G5P2, G5P6, G5P8, G6P6 and G6P9) show very strong interest in using eBanking for its enjoyable self-service experience. With such a high degree of involvement, eBanking customers should also have a very high tendency of depending on using eBanking to achieve their financial goals. Therefore, it is legitimate to propose the following hypothesis:

H_5 *Involvement has a direct positive effect on eBanking service dependency.*

Involvement-eService Encounter Satisfaction Relation

Trevino and Webster (1992) believe that CMC technologies can involve the user in the interaction process. They also claim that the involvement is enjoyable and will keep the users to using the system. In line with their thoughts, the current research model proposes that involvement in eService interaction contributes positively to eService encounter satisfaction.

According to Csikszentmihalyi (1975) and Miller (1973), involvement is self-motivating as it encourages repetition and is pleasurable. eServices via the Internet are also effective to focus users' attention because they have to concentrate on the text and image presented in an interactive format on the computer screen. The multiple options and comprehensive menus also arouse the curiosity and interest of customers to further navigate the eService site. In this interaction process, the

eService customers might perceive a high degree of eService encounter satisfaction because of the positive and rich experience.

As reflected in the literature, customer participative behaviours should be fostered to develop a satisfying relationship (Ennew and Binks, 1999; Fyall et al., 2003), and customer satisfaction should be enhanced to strengthen the loyalty of customers (Bolton, 1998; Gwinner et al., 1998; Methlie and Nysveen, 1999). Such customer participative behaviours ensure the successful service delivery and relationships along the dimensions of information sharing, responsible behaviour and personal interaction or communication (Ennew and Binks, 1999; Worley-Louis et al., 2003).

eBankers (eB1 and eB2) point out that they aim to offer an intimate experience to customers. The eBanking site is an involving virtual environment as customers are free to navigate and there are a lot of service options available. Customers are also capable, interested in and want to get involved in the interaction process. Thus there should be a high possibility that a satisfied encounter experience can be achieved.

Other eBankers (eB2 and eB3) believe that the active participation of customers represents their high involvement in the eBanking process. In such a high

involvement context, customers will be satisfied in the eService encounter process once their goals are achieved.

Another eBanker (eB3) believes that engagement in the online billing payment will lead to encounter satisfaction. eB2 thinks that online bill payment is a function having simple operation steps with low risk, thus customers get involved easily and consequently become satisfied.

On the eBanking customers' side, participants in the focus groups have positive participatory experience with eBanking, such as frequent and easy access to account information, account management and market information (G5P2, G5P4, G5P9, G6P1, G6P8 and G6P10), deep concentration to execute transactions (G5P6 and G5P11), enjoyment during navigation of the eBanking site (G5P1, G5P2,G6P4 and G5P11), an interesting self-service process (G5P1 and G5P6), and completion of banking tasks (G5P8, G6P6, G6P7 and G6P9).

With all these positive experiences of involvement with eBanking, customers should have a high possibility to attain encounter satisfaction. Therefore, it is legitimate to propose the following hypothesis:

H_6 *Involvement has a direct positive effect on eBanking service encounter satisfaction.*

eService Dependency-eService Encounter Satisfaction Relation

The concept of eService dependency is discussed in the previous section. It is new to Internet marketing and eService research. During the expert interview, an eBanker (eB2) pointed out that once customers get used to use eBanking, they will depend on it. Quoting his experience of face-to-face interaction at branch banking, he believes that more frequent and quality interaction, no matter whether face-to-face or online, leads to customers' dependency. As a consequence, eBanking customers will be more satisfied and loyal. Two other eBankers (eB3 and eB4) agree that developing customers' habit of using eBanking is very important.

Memmi (1984), Ball-Rokeach and DeFleur (1976) and Ball-Rokeach (1985) support that dependency is the outcome of the gratification of needs relying on the resources of the counterpart. In line with their thoughts, eBanking offers resources to gratify customers' needs of interactivity, control and involvement in eService. When customers get used to use eBanking with interactivity, control and involvement for achievement of their financial goals, their eService dependency will then be built up.

Wang (2001), Anderson (2001), and Chou and Hsiao (2000) confirm that Internet users with Internet dependency perceive the Internet to be satisfactory. eBankers (eB2, eB3 and eB4) also share the belief that dependency leads to encounter satisfaction. It is then logical to propose that eService dependency can be

used to predict the satisfaction of an eService encounter in specific, and overall satisfaction with, and loyalty to the service provider in general.

eService dependency is a new concept in eService and its relationship with eService encounter satisfaction has not been realised or tested before. However, based on the preceding analysis based on expert and customer opinions and relevant literature, the following hypothesis is proposed:

H_7 *eBanking service dependency has a direct positive effect on eBanking service encounter satisfaction*

eService Dependency, eService Encounter Satisfaction, Overall Satisfaction and Loyalty

Customer satisfaction and loyalty are the core constructs of service. Transactional marketing and service encounter satisfaction are only an intermediate step in the marketing management process while solidifying customer relationships strengthen overall customer satisfaction, as well as building up customer loyalty and marketing dominance (Berry and Gresham, 1986; Berry and Parasuraman, 1991).

Service encounter satisfaction, overall satisfaction and their relation are well researched in traditional marketing. They have been found to be distinct to consumers, but highly correlated (Bitner and Hubbert, 1994). Overall satisfaction is the outcome or the cumulative effect of positive experience with a set of discrete

service encounters or transactions with the service provider over a period of time (Bitner and Hubbert, 1994; Oliver, 1997; Rust and Oliver, 1994; Jones and Suh, 2000). Loyalty is the attitudinal commitment and behavioural action to the service provider (Engel, Blackwell and Kollat, 1982; Oliver, 1999; Zeithaml, 2000; Rust, Zeithaml and Lemon, 2000).

In contrast to service encounter satisfaction, the phenomenon of service dependency and its impact on overall satisfaction and loyalty are relative new and it is a neglected research area. Haytko and Simmers (2009) highlights that the rising dependence on technological encounters and the resulting increase in the number of encounters increase the importance of satisfaction with technological interactions on overall satisfaction.

The current research identifies its importance and further examines its relationship with Internet communication, eService encounter satisfaction, overall satisfaction and loyalty. The current model incorporates eService dependency and proposes its positive influence to eService encounter satisfaction, overall satisfaction and loyalty.

The following five sections – *eService Dependency-Overall Satisfaction Relation, eService Dependency-Loyalty Relation, eService Encounter Satisfaction-Overall Satisfaction Relation, eService Encounter Satisfaction-Loyalty*

Relation and *Overall Satisfaction-Loyalty Relation* – discuss and justify the hypothetical relationships between eService dependency, eService encounter satisfaction, overall satisfaction with bank and loyalty to bank respectively. Their relationships are substantiated by relevant literature, research, or findings from expert interviews with eBankers and focus group study with eBanking customers.[5]

eService Dependency-Overall Satisfaction Relation

eService dependency is considered as an outcome of customer-eBanking Internet interaction. It implies the high tendency of reliance on a service format for goal attainment.

From the practitioners' perspective, eBankers are very interested to understand the eService dependency-overall satisfaction relation. In general, they believe that eService dependency is represented by frequent Internet interactions, acceptance of eBanking as the preferred format of interaction and the habitual usage of eBanking by customers. Meanwhile, all of the eBankers support the importance of overall satisfaction in banking services and some eBankers (eB2 and eB3) already assume the positive influence of dependency on satisfaction and loyalty. In fact, the increasing popularity of online bill payment (Beer, 2006; Johnson, 2008) and

[5] The details of the findings from the expert interview and focus group study on eService dependency, eService encounter satisfaction, overall satisfaction with bank and loyalty to bank can be found in sections *eService Encounter Satisfaction in the Eyes of eBankers, Dependency, Overall Satisfaction with the Principal Bank, Loyalty to the Principal Bank,* and *eService Dependency, eService Encounter Satisfaction, Overall Satisfaction and Loyalty*, Chapter 5 of the thesis.

eTrading services illustrate the effect of eService dependency on overall satisfaction to the principal bank.

With reference to these views, it is argued that once an individual exhibits dependency on eBanking service, such a tendency is very likely to contribute to the overall satisfaction and loyalty. The following hypothesis is then proposed:

H_8 *eBanking service dependency has a direct positive effect on overall satisfaction with the principal bank*

eService Dependency-Loyalty Relation

Following the above analysis on the eService dependency-overall satisfaction relation, it is further proposed the positive influence of eService dependency on another outcome of customer relationship – loyalty.

In fact, it is not difficult to understand that the continuous usage of and reliance on a preferred service will contribute to overall satisfaction and loyalty to the principal service provider. Once the dependency on eService has been developed, customers are more likely to use the eService regularly and frequently in order to maximize utility as well as return from the preferences. In other words, loyalty is very likely to develop.

With reference to the expert opinions, eBankers believe that once eBanking usage becomes part of customers' habit and part of their lifestyle, the customer will

have a dependency relationship with eBanking. Such a high tendency of reliance of a service format for task completion in daily life might lead to long-term loyalty, at least the behavioural aspect of loyalty. One eBanker (eB2) believes that if such an online relationship is handled effectively, levels of satisfaction and loyalty can be far higher.

Based on the preceding analysis, the following hypothesis is proposed:

H_9 *eBanking service dependency has a direct positive effect on loyalty to the principal bank*

eService Encounter Satisfaction-Overall Satisfaction Relation

Oliver (1997, 1999) claims that customers cross into the loyalty stage after a series of satisfying service encounters. Haytko and Simmers (2009) point out that technological encounter satisfaction plays a role in overall satisfaction with the service provider.

From eBankers' expert opinion, they all believe in the cultivation of satisfaction. One eBanker (eB2) describes satisfaction building as an incremental process. In line with the view from academia, eBankers support that overall satisfaction is an aggregation of transaction-specific evaluations. As eBanking is a relatively new mode of communication and transaction driven by computer technology, they observe that customers have to go through the adoption process.

Whether various encounters in the adoption process contribute to overall satisfaction to the service provider is worth examining.

On the side of eBanking customers, they reveal that their overall satisfaction towards the principal bank is enhanced because of their satisfaction towards their eService encounters. However, a customer (G8P9) thinks that eService encounter has negative impact on his overall satisfaction towards the bank. He shares that the offering of eBanking service actually limits customers' choices because banks are cutting down branch banking services.

According to the majority views of eBankers and eBanking customers, the following hypothesis is proposed:

H_{10} *eBanking service encounter satisfaction has a direct positive effect on overall satisfaction with the principal bank.*

eService Encounter Satisfaction-Loyalty Relation

The effect of service encounter satisfaction on loyalty has not been explored before in a traditional marketing context. However, it is argued that eBanking service features, such as availability of comprehensive information online, unlimited interactions during the whole service process and personalization, allow customers to derive greater utility and a higher degree of encounter satisfaction. Such encounter satisfaction, in addition to its effect on overall satisfaction, should also contribute

directly to loyalty to the service provider under the support of those unique features of eBanking.

Although there are contradictory views from eBankers on the eService encounter satisfaction-loyalty relation, the majority view supports that eBanking encounter satisfaction contributes to loyalty. An eBanker (eB2) supports that positive online relationships strengthen customer loyalty. He share his expeirence that his eBanking customers will give the principal bank a higher priority when they purchase additional financial products. eB1 and eB2 also realise that when eBanking customers are satisfied with eBanking services, they are more likely to purchase additional products and services than other customers. Another eBanker (eB4) points out that eBanking services and functions, such as eTrading, can retain customers. It implies eBanking encounter satisfaction's positive impact on loyalty.

In contrast, another eBanker (eB1) shares the opinion that it is an aspiration for eBanking to build up customer loyalty. He thinks that the Internet is a highly transparent medium which encourages comparison of prices and return of different service providers. The transparency stimulates customers' shifting behaviour and their tendency to search for bargains. Thus customers' loyalty is weakened.

eBanking customers share a positive and unified view on the eService encounter satisfaction-loyalty relation. They agree with the positive influence of

eService encounter satisfaction on loyalty towards the principal bank. Althought having different intrepretations on loyalty, they believe that loyalty is a long-term relationship between themselves and the bank.

Based on the above views, the following hypothesis is proposed:

H_{11} *eBanking service encounter satisfaction has a direct positive effect on loyalty to the principal bank.*

Overall Satisfaction-Loyalty Relation

Satisfaction and loyalty are confirmed to be the outcome of relationship marketing. (e.g. Bove and Johnson, 2000; Eriksson and Vaghult, 2000; Hart and Johnson, 1999; Iacobucci and Hibbard, 1999; Grönroos, 1990; Han, Wilson and Dant, 1993; Singh and Sirdeshmukh, 2000). Their positive relationship has been extensively researched and confirmed (Ahluwalia, Unnava and Burnkrant, 1999; Homburg and Giering, 2001; Shankar et al., 2003; Olsen et al., 2005; Zeithaml et al., 1996). Satisfaction is the key to achieving customers' loyalty (Dick and Basu, 1994; Oliver, 1999). Customer satisfaction is, therefore, a prerequisite for building up customer loyalty (Reichheld, 1995; Chiu et al., 2005; Ennew and Binks, 1999). Customers would remain loyal when greater benefits are received and higher degree of satisfaction is perceived (Bitner, 1995; Gwinner et al., 1998).

In general, customers can be satisfied with product performance, services performance, system performance and encounter performance. Once the customers are satisfied with the company with regard to these aspects i.e. the overall satisfaction at corporate level, they would exert loyalty behaviours, such as purchases within the same company repeatedly, purchases across product lines, generate more positive word-of-mouth and more recommendations to other customers, and maintain a long term relationship with the service provider (Evans and Laskin, 1994; Wilson and Mummalaneni, 1986; Bove and Johnson, 2000; Buttle, 1996; Christy et al., 1996; Hart and Johnson, 1999). Loyalty, as a consequence, will then generate greater financial benefits (Reichheld and Schefter, 2000; Semeijn et al., 2005).

To review the eBankers' expert opinion and eBanking customers' feedback, customers show loyalty to the principal bank at both attitudinal and behavioural level. Examples include continuous patronage for long period of time, higher priority while shopping for additional products, high number of accounts and financial products and the personal perception of being loyal to the bank.

With substantiation from the above research, eBankers and eBanking customers' positive opinions, the following hypothesis is proposed:

H_{12} *Overall satisfaction to the principal bank has a direct positive effect on loyalty to the principal bank.*

Summary

This chapter covers the development of the conceptual framework and the associated hypotheses. Literature from Flow Theory in psychology, media dependency in communication, relationship and satisfaction theories from marketing provides the theoretical foundation for the conceptual framework. Findings from the in-depth expert interviews with eBankers and from the focus group study with current eBanking customers also substantiate the 12 hypothetical relationships in the eService model. 12 hypotheses are also proposed accordingly. Chapter 4 will explain the research methodology and design for data collection.

CHAPTER 4

RESEARCH METHODOLOGY AND DESIGN

In Chapter 3, the conceptual model is formulated and hypotheses are developed. Chapter 4 then concentrates on the research methodology and the design for the current research. It aims to set up the necessary research groundings, provide a general overview of the research methodology adopted, and discuss the plan and process of data collection.

Chapter 4 first discusses the research beliefs in relation to research philosophy. The research philosophy adopted has certain influences on the research design. The hybrid methodology approach is considered most appropriate. As in-depth expert interviews, focus group studies and a questionnaire survey were used to collect data for analysis, justification for this is also made in the first part of the chapter.

The second part briefly discusses the research process as a whole with a clear flowchart to illustrate. The five critical steps in the process are covered: in-depth expert interviews with eBankers, a literature review to identify relevant theoretical models and constructs, focus group studies with eBanking customers to refine the identified constructs and variables, formulation of the conceptual model, and a questionnaire survey to collect quantitative data for analysis and model validation.

Research Philosophy

Research methodology is important, as it determines the approaches, methods, and strategies to be adopted. To design and conduct research in the area of social science, researchers must understand the philosophy behind the research. Philosophy is concerned with the nature of truth and of experience and meaning. This leads to epistemological concerns about the origin of knowledge, the place of experience in generating knowledge and the place of reason in doing so, the relationship between knowledge and certainty, and the changing forms of knowledge that derive from new conceptualisations of the world (Bernstein, 1988; Dobson, 2002). Easterby-Smith et al. (1991) offer three primary reasons for knowledge of the philosophy to be used in formulating research:

- It helps to clarify and design the overall configuration of a piece of research.
- It offers researchers insights into which research designs will work and which will not.
- It helps researchers to identify and create designs that may be outside their past experience. It may also help researchers to adapt research designs according to the constraints of different subject or knowledge structures.

Ontology is the best starting point to discuss the research philosophy. The issue of ontology lies prior to and governs subsequent epistemological and

methodological assumptions (Chua, 1986). Ontology is an explicit specification of a conceptualisation and a systematic account of 'existence' (Gruber, 1993). It refers to the nature of the world around us. In simple terms, ontology means 'what there is to know' (Frankfurter and McGoun, 1999). Researchers' ontological assumptions affect the way they view the world and what they consider to be 'real'. Broadly speaking, there are two basic ontological positions: materialistic and idealistic. The materialistic tradition suggests that reality is objective, concrete, or material. In contrast, the idealistic tradition suggests that reality is subjective, spiritual, or non-material and relativistic.

Marketing and management researchers more often use their epistemological beliefs to guide their research. Epistemology, part of research philosophy, is a principle derived from ontology. It is concerned with providing a philosophical grounding for deciding what kinds of knowledge are possible and how we can ensure that they are both adequate and legitimate. It concerns how we know, what we know, and what is knowledge (Swepson, 1999). In simple terms, it means 'how it is to be known' (Frankfurter and McGoun, 1999). Because it is a branch of ontology, there are two major modes of thinking that help determine how we conceptualise reality and hence lead to which research approach to adopt. Each of these modes, with its own distinctive manners and traits, tells us what makes a complete piece of research

and how should we go about achieving the research. Researchers do not have consistent terms for describing these two modes of thinking. The first mode is frequently described using the following terms:

- positivist
- quantitative
- deductive
- empirical
- realist
- generalisability
- facts
- observational, etc.

The terms associated with the second mode of thinking are:

- phenomenological
- interpretive
- qualitative
- inductive
- nominalist
- non-experimental
- meaning

- theoretical, etc.

To be clear, the first mode of thinking is referred to as ‘positivism’ and the second mode of thinking is referred to as ‘phenomenological’, as discussed in Easterby-Smith (1991).

These two distinctive philosophies are very influential on a researcher’s research strategy and research methodology. Positivist approaches tend to be quantitatively oriented, focusing on facts and consequently offering statistically reliable and generalisable conclusions, whereas phenomenological approaches tend to be qualitative, focusing on meanings, and consequently offering richness and depth.

Very often, the two modes of research thinking are set against each other as polar opposites, but they are related (Nachmias and Nachmias, 1987). Before exploring an appropriate methodology to support the research aims, the next section discusses the perspectives of positivism and phenomenology and how these modes of thinking contrast and compare.

Positivism

Referring to Kerlinger's definition, research takes the view of positivism as "traditional" research. A classic proponent of this view, Auguste Comte (1953), describes what knowledge is: "All intellects have repeated, since Bacon's time, that there can be no real knowledge but that which is based on observed facts". The key idea of positivism is described by Easterby-Smith (1991) as the social world exists externally, and that its properties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition. Cohen and Mannion (1989) describe positivism as the systematic, controlled, empirical and critical investigation of hypothetical propositions about the presumed relations among natural phenomena.

In the research area related to marketing, this paradigm is the dominant method of research. However, there is an ongoing debate indicated in the work and writings of positivists, concerning methodological and epistemological issues. Some researchers use alternative approaches to make contributions to knowledge.

Strengths and Weaknesses of the Positivist Approach

Quantitative research designs are characterised by the assumption that human behaviour can be explained by what may be termed "social facts", which can be investigated by methodologies that utilise the deductive logic of the natural sciences

(Horna, 1994). Quantitative investigations look for distinguishing characteristics, elemental properties and empirical boundaries and they tend answer the questions of how much and how often (Nau, 1995).

A quantitative research design allows flexibility in the treatment of data, in comparative analyses, statistical analyses, and the repeatability of data collection in order to verify reliability.

Jayaratne (1993) introduces a further advantage of a quantitative research design, noting that as well as producing what may be considered more objective data, it may allow more objective analysis. Reliability and validity may be determined more objectively than qualitative techniques. Indeed, many of the arguments for the use of quantitative research have pragmatic origins in allowing large-scale data collection and analysis at reasonable cost and effort, as well as providing statistical proof.

The weaknesses of such quantitative research designs lie mainly in their failure to ascertain deeper underlying meanings and explanations of certain behaviour, even when significant, reliable and valid. The quantitative assumption is that "people can be reduced to a set of variables which are somehow equivalent across persons and across situations" (Reason and Rowan, 1981, p. xiv). Quantitative research is strong in measuring such variables, and this measurement is the focus of

the research. Another weakness of quantitative approaches lies in their tendency to take a 'snapshot' of a situation as it measures variables at a specific moment in time. Customer behaviour may actually be affected by temporal changes or other situational factors which cannot always be identified within a single quantitative study.

Phenomenology

According to Reason and Rowan (1981), the phenomenological paradigm is a relatively new paradigm of enquiry. In opposition to a positivist approach, a phenomenologist believes that reality is socially constructed and is given meaning by people rather than objectively determined (Husserl, 1946). Phenomenologists argue that knowledge cannot be value free, that is, independent of the worldviews, concerns, values and interests of both the researchers and the researched (Kemmis, 1991). Kant (1787) offers his classic description of this belief: "All our knowledge begins with experience; it does not follow that it arises out of experience".

Therefore, according to this viewpoint, it is impossible to understand objects as things in themselves; rather, it is only the individual's perception of an object in question. Research is a form of social enquiry that focuses on the way people interpret and make sense of their experiences and the world in which they live (Holloway, 1997). In the phenomenological research process, researchers aim to

discover patterns in the ways people structure meaning from their experiences. Giorgi (1970) termed phenomenological methods a 'human science' approach, in contrast with the behavioural and analytically cognitive 'natural science' approach.

Strengths and Weaknesses of the Phenomenological Approach

Qualitative research designs are associated with interpretative approaches, from the participants' emic point of view, rather than etically measuring discrete, observable behaviour. An emic point of view, according to Pike (1967), results from studying behaviour from inside the system. Focus groups or interviews generate data from an emic point of view as participants share their own views in their own words according to their own categories and perceptions. Such an "insider's" point of view is in contrast to the etic point of view resulting from studying behaviour from outside a particular system.

Qualitative methodologies are strong in those areas that have been identified as potential weaknesses within the quantitative approach, such as the use of interviews, to provide a deep rather than broad set of knowledge about a particular phenomenon. Thus it is appropriate to use it to investigate the cognitive and affective aspects of customers' behaviour. This depth allows the researcher to achieve empathetic understanding which cannot be found in quantitative research designs. The argument used is that quantitative methods, using predetermined subjects or

concepts by the researcher, measure human behaviour 'from outside', without accessing the meanings that individuals give to their measurable behaviour. Thus the flexibility of qualitative methodologies is appropriate for research that is exploratory in nature.

However, objections to the qualitative approach do exist. The main argument against this approach is the concept of validity, in that it is difficult to determine the truthfulness of findings. The relatively low sample numbers often encountered may also lead to claims of findings being unrepresentative of the population. Thus, the generalisability of the views of those respondents/informants to the general population is limited. For the current research, it is therefore argued that the use of a hybrid methodology approach may enable the researcher to avoid such potential criticisms.

The Debate between the Positivist and the Phenomenological Approaches

The debate about which approach is more helpful, positivist or phenomenological, has not been resolved. Phenomenologists criticise the positivist approach for not fully representing the immediate experience and consciousness of the person(s) or object(s) under study (Keat, 1981). Furthermore, it does not take into account the complex, changing, uncertain contexts in which practitioners work. It excludes notions of choice, freedom, individuality and moral responsibility and

therefore restricts what researchers can learn from studies using this approach (Schon, 1983).

In response to these criticisms, positivists insist that all genuine knowledge is based on sense experience and can only be advanced by means of observation and experiment (Cohen and Mannion, 1989), and the outcome of research must be hard data and generalisable conclusions (Bell, 1987).

Nevertheless, some researchers agree that both research thinking modes need each other more often than not. Nachmias and Nachmias (1987) suggest that a theory/concept is merely a symbol of the empirical but not the empirical itself. Observational-empirical research assists phenomenological thinking, calls for new theoretical formulations, leads to the refinement of existing thinking, and serves the function of verification (Nachmias and Nachmias, 1987). As scientific knowledge is provable by both conceptual-theoretical (phenomenological) and observational-empirical (positivist) methods, it is advisable for researchers to adopt more than one single research paradigm to reflect the multifaceted nature of organisational reality (Burrell and Morgan, 1979).

In fact, in the positivist versus phenomenological debate, the banter among qualitative and quantitative researchers is ‘essentially unproductive’ (Miles and Huberman, 1994). There is no such thing as the best research paradigm/research

methodology; the one adopted must be chosen specifically depending on the purpose (theory building or generalisable conclusion), suitability (time, money, resources, and constraints), appropriateness (the audience) and the researcher's own experience and preference (Hathaway, 1995). However, many researchers would agree that qualitative and quantitative methods should be used together more often than not.

Not arguing for a hierarchy of research methods, this research adopts the third way, the hybrid methodology. It is argued that this approach provides even greater strengths to the researcher and may enhance both the quality and perception of the research by others. For the present study, both qualitative and quantitative methods are used in order to incorporate the advantages of these two methods.

Having discussed the basic philosophical assumptions of the two paradigms that determine the research methodology, a hybrid methodology approach combining quantitative and qualitative methods in this research is proposed. The reasons behind the adoption of a mixed approach are discussed and justified in the following section.

Hybrid Methodology: Combining Qualitative and Quantitative Methods

The choice of research design must be appropriate to the subject under investigation (Patton, 1987). Internet activities consist of cognitive, affective, and behavioural components. It is argued that the use of a single methodology often fails to explore all of these components. The use of a hybrid methodology approach is suggested to counteract the weaknesses of a single method and to enhance the quality of the research. Thus such a hybrid methodology approach is a worthwhile means for gaining a fuller understanding of Internet behaviour.

Because the current research aims for model building, it is important to gain an in-depth understanding of the phenomenon. Thus it is appropriate to start the research by following the phenomenological approach. Based on the concepts and phenomena explored and identified, a positive approach can be used to discover and analyse the relationships between constructs of Internet banking and customer satisfaction and loyalty, with support from data collected from a large set of samples.

Theoretical Justification

The argument to integrate qualitative and quantitative approaches is justified by three major reasons prevalent in the literature. The first is to achieve cross-validation or triangulation. Combining two or more theories or sources of data to study the same phenomenon will allow the researcher to gain a more complete

understanding of it (Denzin, 1970). Clarke and Yaros (1988) claim that combining research methods is useful in some areas of research because the complexity of phenomena requires data from a large number of perspectives and the use of a broad spectrum of qualitative and quantitative methods. Such justification highlights the interdependence of different research methods with a combinant effect.

The second is to achieve complementary results by using the strengths of one method to enhance the other (Morgan, 1998). It is argued that both single methodology approaches (qualitative only or quantitative only) have strengths and weaknesses. The combination of methodologies can achieve a situation blending qualitative and quantitative methods of research to produce a final product with significant contributions of both (Nau, 1995). Qualitative data can support and explicate the meaning of quantitative research (Jayaratne, 1993). Such justification maintains the independence of different research methods with an additive effect.

The third justification is based on the commonality of commitment to understand the reality of the two paradigms and their associated research methods. The two paradigms are thought to be compatible because both aim to understand and improve the human condition, have a common goal of disseminating knowledge for practical use, and a shared commitment for rigour, conscientiousness, and critique in the research process (Reichardt and Rallis, 1994). King, Keohane and Verba (1994)

claim that both qualitative and quantitative research has a unified logic, and that the same rules of inference apply to both. In general, the two approaches can be combined because they share the goal of understanding the world (Haase and Myers, 1988). Casebeer and Verhoef (1997) believe that qualitative and quantitative methods are a part of a continuum of research that has specific techniques selected based on the research objective.

Although none of these views addresses the issue of the differing ontological assumptions behind them, they share and support the 'truth-finding' or 'fact-finding' objectives of the paradigms and the associated research methods.

Combinations of Research Methods

Following the above analysis justifying the hybrid methodology of research, it is believed that the formulation of an ideal and pragmatic combination of research methods can enhance the value of the data collected, in other words, the trustworthiness of the information. In addition, clear objectives and careful execution of each step in the data collection process are critical to ensure the trustworthiness of information. Marsland, Wilson, Abeyasekera and Kleih (2001) summarise four aspects to evaluate trustworthiness.

Table 4.1 Four Aspects to Evaluate the Trustworthiness of Information

Terminology used by positivist	**Terminology used by phenomenologist**	**Definition**
Internal validity	Credibility	The confidence in the truth of the findings
External validity	Transferability	The applicability of the findings to other contexts or to other populations
Reliability	Dependability	The replication of the findings with similar subjects in a similar context
Objectivity	Confirmability	The certainty of the findings being determined by the subjects and the research context and not by the investigators

Marsland, Wilson, Abeyasekera and Kleih (1998) formalise three types of combinations, namely merging, sequencing and mixed suite. Merging is one way of combining qualitative and quantitative approaches by swapping tools and attitudes from one method to the other, such as using statistical techniques to analyse binary, categorical and ranked data sets generated from participatory investigation. Sequencing is the use of the findings from one method to facilitate further investigation using another method, such as using participatory techniques in exploratory studies to formulate hypotheses which will then be tested by questionnaire survey. Mixed suite is the concurrent use of tools and methods from different methods, such as the use of a survey and participatory enquiry for attitudes, beliefs and perceptions of the target population concurrently.

Following the typology by Marsland et al. (2001), the following section confirms and justifies the use of a sequential type of combination in the current research.

Adopting Sequencing as the Hybrid Methodology Approach

Different research methods have different roles in the process. In this research, it is determined that qualitative research plays the exploratory role to understand phenomena relevant to eBanking from both the service providers' and users' perspectives, whereas quantitative research validates the phenomena. Such approach is to ensure that what is studied is independent of the enquirer and is described without distortion by his or her interests, values, or purposes (Smith and Heshusius, 1986). In fact, the hybrid methodology design starting with a qualitative pilot study followed by quantitative research is the most frequently used approach (Morgan, 1998).

According to Marsland et al. (2001), the adoption of a sequential type of combination in the stage of data collection is appropriate for the current research. Firstly, in-depth expert interviews with eBanking practitioners and focus group interviews were conducted in order to generate qualitative output. After systematic analysis of the output, relevant constructs and variables will be identified. Concurrently, reviews of literature and research will be conducted to facilitate the

identification, definition and operationalisation of the core constructs and variables for further testing.

Following these open-ended enquiries are the close-ended enquiries in the form of questionnaire survey research. Based on the findings from the qualitative study and literature review, hypotheses are formulated and a structured questionnaire is developed. It will be administered to eBanking users who are selected through the specific sampling method. The quantitative data collected will be tested and analysed by statistical software, with the aim to derive statistically valid and reliable estimations that are representative of the population. Based on the result of the analysis, the hypotheses will either be accepted or rejected. Consequently, the relationship between constructs can be confirmed or declined.

This approach, i.e., the use of non-structured or semi-structured tools before structured questionnaires, is an accepted and common practice in marketing research. According to the Association of British Market Research Companies (ABMRC, 1989),

> Prior to any large-scale quantitative study particularly in a relatively unknown market, it is strongly recommended that a qualitative phase of research is initially conducted, the main purpose being to understand the vocabulary and language used by customers as well as understanding their motivations and attitudes towards given services, products and usage occasions. The findings of the qualitative research provide invaluable input to the quantitative stage in terms of the line and tone of questioning, and of course the overall structure and content of the quantitative phase. (p. 26)

Summary

To sum up, research objectives and information requirements are the keys to determine the type of research design. A mixed research design, i.e. hybrid methodology approach, with both qualitative and quantitative studies is appropriate for studying new areas with limited research findings and models. In fact, the triangulation of research methods has been widely used in marketing research (Churchill, 1979).

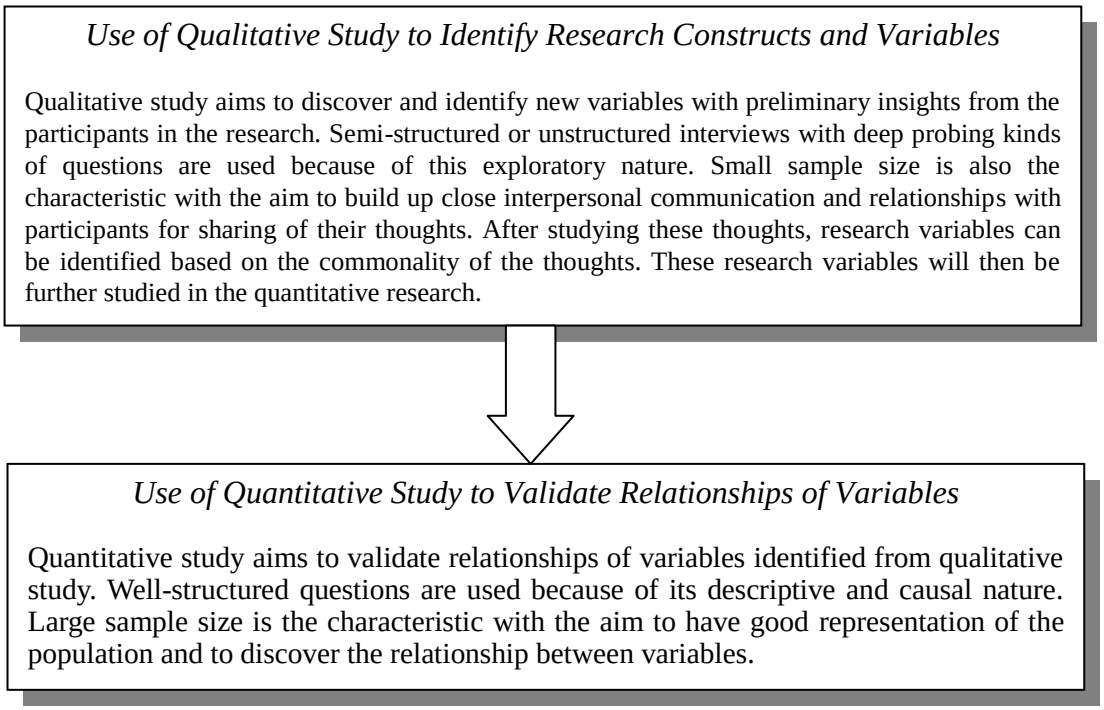


Figure 4.1 Qualitative and Quantitative Studies

After carefully examining the alternative research paradigms and methodologies in marketing research, a hybrid-method of research was adopted, i.e., social constructionist qualitative research plus positivist quantitative research. This

method aims to discover a clear picture of the relationship between constructs in the proposed research framework, with good quality of validity and generalisability. By using social constructionist qualitative research, the researcher gains insights and understanding regarding the reality with the respondents in a very in-depth approach. By using positivist quantitative research, the researcher discovers and confirms/disproves the relationship between certain constructs by surveys with a large number of sample respondents.

This section justifies the use of a hybrid methodology approach using a sequential-type combination of expert interviews, focus group study and survey research. The following section discusses the execution of the whole research process.

The Research Process

The research process can generally be understood as the steps a researcher goes through from research idea generation, research question formulation, methodology design, data collection and analysis, to completion of the research report. However, different topics to be studied and different objectives and methodology adopted by the researcher might influence specific steps in the research process. Figure 4.2 illustrates the process of the current research.

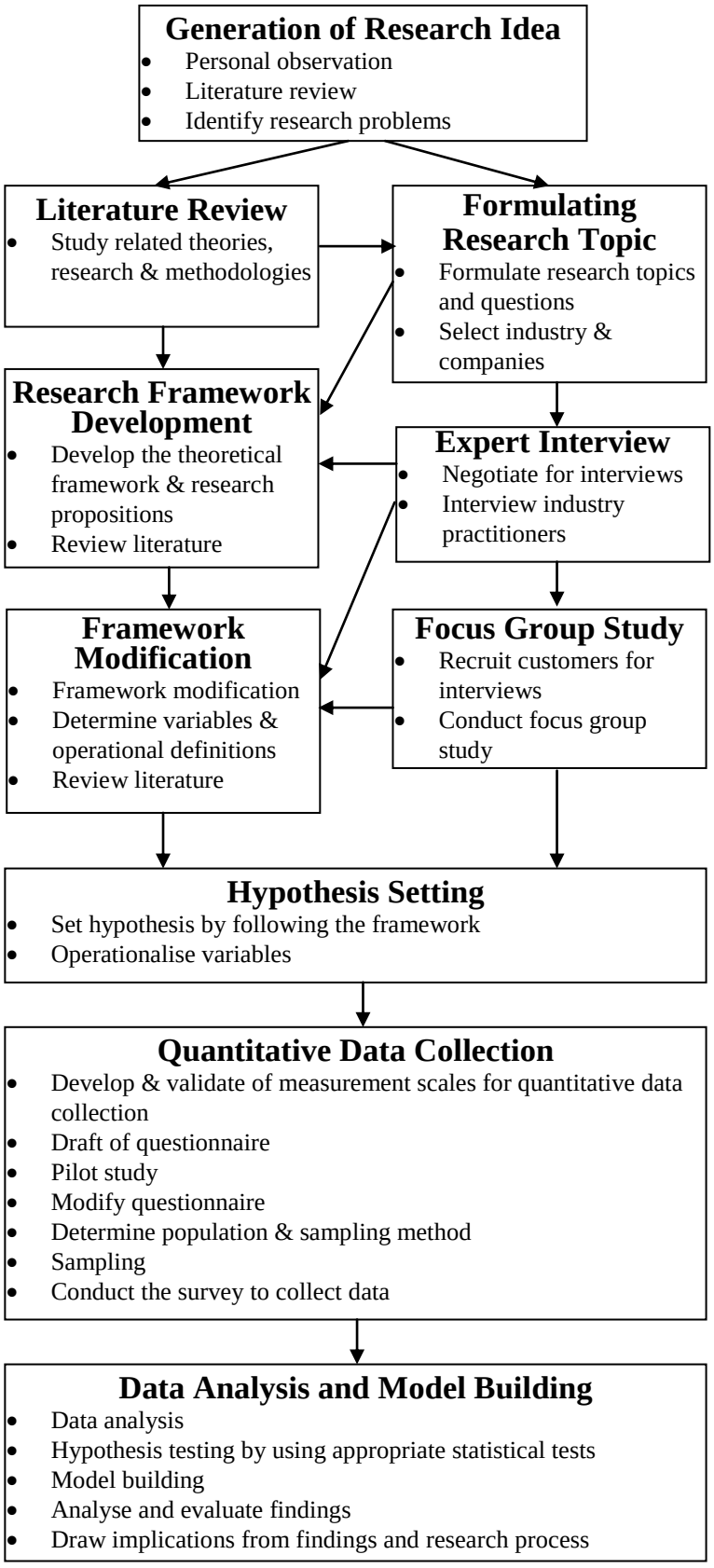


Figure 4.2 The Research Process

Generation of the Research Idea

The origin of the research idea comes from the researcher's personal observation of and curiosity about how the Internet has changed the scenario of the company-customer relationship in the service business.

Information technology (IT) plays a significant role in the process of attracting and keeping customers (Duncan and Moriarty, 1998) as it shapes company-customer communication (Wayland and Cole, 1997; Bitner et al., 2000; Parasuraman and Grewal, 2000), and creates, enhances and transforms customer relationships (Gordan, 1998; Davis, 1997). Hoffman and Novak (1996) and Davis et al. (1999) claim that the use of eCommerce as a means of enacting transactions and relationships with customers is increasing exponentially. The increasing popularity of eBanking service in Hong Kong clearly illustrates such a trend. According to the Hong Kong Monetary Authority (2009), the number of personal eBanking accounts reached 6.2 million in 2009, a 248% increase while comparing with the figures in 2004. Table 1.1 *The Growth of eBanking Services in Hong Kong* lists out the figures in detail. A comprehensive discussion regarding eBanking development and usage by customers in Hong Kong can be found in Appendix A.

Following this line of thought, it will be very interesting to further investigate how eServices contribute to the relationship between companies and customers. To

be more specific, it is worth studying how the Internet communication attributes of e-Services contribute to customer satisfaction and loyalty.

Research Objectives

The research objectives are:

- To identify the Internet communication attributes in the context of eServices from customers' perspectives
- To theorise the relationship between the identified attributes and customer satisfaction with and loyalty to eBanking service and the associated service providers
- To formulate an eServices model for eBanking.

Research Questions

The following research questions are:

1. What are the Internet communication attributes of the eServices of financial institutions?
2. How do these Internet communication attributes contribute to customer satisfaction and loyalty?

These two research questions are studied with an exploratory qualitative approach in order to identify the attributes that have not yet been investigated in other research.

The contributions of the identified attributes to customer satisfaction and loyalty also have to be examined. The research questions are:

3. How does interactivity affect customer satisfaction with and loyalty to the eService provider?
4. How does control affect customer satisfaction with and loyalty to the eService provider?
5. How does involvement affect customer satisfaction with and loyalty to the eService provider?

The three attributes – interactivity, control and involvement – were identified in the qualitative study and literature review. Then the quantitative approach was adopted to study their relationship with customer satisfaction and loyalty. Survey research was used, as it collected a sufficient amount of data to quantify and verify the relationships among the three attributes and customer satisfaction and loyalty.

Data Collection Process

In this section, the data collection process for this research is discussed in detail. The data collection process consisted of three major parts: in-depth expert interviews with eBanking practitioners, focus group interviews with eBanking customers, and extensive literature research and review conducted concurrently. The

rationale and aims for adopting these data collection means are discussed, and the execution process for each individual means is documented in this section.

In-depth Expert Interviews with eBankers

The in-depth expert interview is a preliminary study which aims to collect the latest information and views from the perspective of industry practitioners. As discussed in Chapter 1 and Chapter 2, eService is an area that is relatively new in the service marketing discipline, and there is a lack of research on how the Internet communication attributes of eService affect customer satisfaction and loyalty.

The banking industry is an ideal business to select for study, as it is one of the earliest businesses which invested in, developed and offered eServices, i.e., eBanking services to customers. According to the Hong Kong Association of Banks, Hong Kong has 23 banks that offer retail banking services. Of these, 20 offer eBanking services to customers. Different eBanking services offered by different principal banks have different degrees of comprehensiveness. However, it can be observed that most of the eBanking sites offer advanced services such as share trading and foreign currency exchange.

The in-depth expert interview serves the following aims:

- To understand the significance of eBanking to the bank as a whole
- To understand and examine the strategy used for eBanking

- To explore the Internet communication attributes contributing to the satisfaction with eBanking services
- To explore the customers' behaviour and characteristics while using eBanking, with reference to the Flow Theory and Technology Acceptance Model (TAM).

Characteristics of In-depth Interview

An in-depth interview is a dialogue between a skilled interviewer and an interviewee. It is an effective method of exploring in depth the discussion topics with interviewees. Its goal is to elicit rich, detailed materials and new insights that can be used in analysis (Lofland and Lofland, 1995). It is a set of probing questions to gain an idea of what the interviewee thinks (Burns and Bush, 2003). These ideas on in-depth interviews reflect the effectiveness in obtaining views and opinions from the interviewees. In this research, interviewees are eBanking practitioners, i.e., eBankers.

Unlike a questionnaire survey, an interview does not follow a rigid format. It allows the interviewer to be flexible in administering the interview by following the responses of the interviewee. The interviewer seeks to encourage free and open responses from the interviewees, with the aim to have an in-depth exploration of a predetermined set of topics by following the experiences and opinions of the interviewees.

The role of an interviewer is to be a good questioner and an attentive listener. The interview should be similar to a guided dialogue. The interviewer becomes an attentive listener who shapes the process into a familiar and comfortable form of social engagement (Patton, 1990).

Preparation and Organisation

In-depth interviews are characterised by extensive probing and open-ended questions. Thus an interview guide that includes a list of questions or issues to be explored was prepared in advance. It helps to conduct the interview in a more systematic and comprehensive manner.

Identification of Interviewees: Purposeful Sampling

In order to identify suitable experts in eBanking to interview, purposeful sampling is used. Purposeful sampling is a strategy in which particular persons are selected deliberately to collect information that cannot be obtained elsewhere (Patton, 1990; Maxwell, 1996). The most popular eBanking services, in number of eBanking customers, were identified first. According to Nielsen//NetRating (2003), the most popular Internet banks are HSBC, Hang Seng Bank, the Bank of China, Standard Chartered Bank and Bank of East Asia. Letters of invitation for interview were sent to the senior management of the eBanking service. Follow-up letters were sent one

week later. As no reply was received, follow-up phone calls were made. However, for various reasons, all invitations were declined.

Another five banks were then selected: DBS Bank (Hong Kong), Dah Shing Bank, Citi Ka Wah Bank, Citibank (Hong Kong) and China Construction Bank (Asia). Similarly, letters of invitation for an interview to the senior management of the eBanking service were sent. They were selected according to the number of retail outlets in Hong Kong, as it is assumed that the bigger the retail network, the more customers they have and the higher the usage rate of their eBanking service.

Snowball Sampling Using Guanxi as the Alternative

During the invitation process, it has been realised that it is not easy to have the participation of eBankers in the expert interview. In order to identify and invite appropriate participants quickly and successfully, snowball sampling using *guanxi* (personal connections) was adopted, in addition to the purposeful sampling currently using.

According to the Chinese Hanyu Da Cidian (2007), *guanxi* refers to the personal or social connections with a certain group of people in general, or specifically the connections that exist between these people and the actual contact that they have. It represents the existence of a relationship between people who share a common status group or are related to a common person. For snowball sampling,

participants in the interview use his/her social networks (i.e., *guanxi*) to refer the researcher to other qualified people who could participate in the research. For the current research, those qualified participants are the other eBankers. Such a strategy is commonly used when it is difficult to identify and access members of the desired population (Saunders, Lewis and Thornhill, 2007).

While waiting for responses from the second mailing of the invitation letter, one eBanker from one of the first five selected banks was contacted through *guanxi*, and he accepted the invitation to be interviewed.

Later on, the eBanker introduced to the researcher two eBankers from two other banks. Finally, another eBanker was contacted with the help of another interviewed eBanker. In total, four eBankers were interviewed in the period from November 2004 to January 2005.

Due to the sensitivity of the interviewees' roles and functions in their banks, it was agreed that their names and the banks they were working for would be kept anonymous. Two of them are working for multinational banks and two others for local banks. It is believed that their views and information are valuable, as all are experienced in eBanking service development and marketing.

Sample and Research Instrument

In total, four eBankers became the participants in the expert interview. They were interviewed on 16 November 2004, 4 December 2004, 12 January 2005 and 14 January 2005 respectively.

The research instrument developed for the eBankers was a semi-structured interview schedule. The focus of the semi-structured interviews was to gather qualitative data on the following areas:

- The significance of eBanking to the eBanking service providers
- The criteria of successful eBanking service
- eBanking strategy
- The characteristics and behaviour of eBanking customers
- The factors contributing to the satisfaction with eBanking service
- The relationship between eService dependency, eService encounter satisfaction, overall satisfaction with and loyalty to the principal bank

The interview schedule consisted of a series of probing questions related to the above areas. The interview schedule is presented in Appendix B. The semi-structured format allows a higher degree of flexibility to allow a more in-depth discussion and sharing of particular topics by the participants.

The Process of Expert Interviews

All the interviews were conducted in the offices of the interviewees on a one-to-one basis. Each interview lasted from one hour and 45 minutes to two hours and 30 minutes. All the discussion and information during the interviews was recorded by hand in note form. After each interview, the interview notes were reviewed and the transcription was prepared accordingly. The details of the in-depth interviews and findings can be found in Chapter 5 (Qualitative Data Collection, Findings and Analysis).

Literature Review

An extensive literature search and review was conducted concurrently throughout the qualitative data collection process. The review helped to identify relevant models and concepts as discussed in the expert interview, and relevant concepts identified from the literature were also brought up for discussion in the expert interviews. A comprehensive literature review is in Chapter 2.

Literature research provides the theoretical and conceptual context on which to base the current research. The reviewed literature strands and key references include:

- Services marketing (Lovelock, 1983; Parasuraman et al., 1991)
- eService (Sterne, 1996; van Riel et al., 2001; Zeithaml et al., 2002;)

- Internet marketing (Hoffman and Novak, 1996; Hoffman and Novak, 1997; Novak et al., 2000)
- Internet consumer behaviour (Ball-Rokeach, 1985; Chen et al., 2004; Csikszentmihalyi, 1990; Davis, 1989; Koufaris, 2002; Patwardhan and Ramaprasad, 2005)
- Internet communication and interaction (Csikszentmihalyi, 1990; Duncan and Moriarty, 1998; Ghani et al., 1991; Steuer, 1992 Stewart and Pavlou, 2002; Trevino and Webster, 1992; Webster et al., 1993)
- Interactivity (Bezjian-Avery et al., 1998; Dholakia et al., 2001; Heeter, 2000; Liu, 2003; McMillan and Hwang, 2002; Rafaeli, 1988)
- Service encounter and satisfaction (Bitner, 1990; Bitner et al., 2000; Bitner and Hubbert, 1994; Solomon et al., 1985)
- Customer satisfaction and loyalty (Garbarino and Johnson, 1999; Loveman, 1998; Meuter et al., 2000; Oliver 1980, 1997; Shankar et al., 2003; Tse and Wilton, 1988)

Focus Group Study

The focus group study was adopted to collect data from the eBanking customers' perspective. As the impact of flow experience and technology acceptance on the corporate-customer relationship is an area with very limited research coverage,

a focus group study is an appropriate research method for identifying appropriate constructs within these two models for further study in the current research.

Characteristics of Focus Group Study

A focus group study is used to gather qualitative data from a group of people. The participants discuss the specific topic under research, with a moderator who guides the whole discussion. Focus group discussion is particularly effective in providing information about what and why people think, feel and do (Krueger, 1994; Morgan, 1997, 1998). It is usually a gathering of 8 to 12 people who share some characteristics relevant to the study. Although qualitative research provides results that are not necessarily representative of the general population, it provides preliminary explanations of phenomena in the marketplace and consumer behaviour.

Krueger (1994) believed that focus group study is beneficial for identification of major themes and concepts. Unlike in-depth interviews and questionnaire surveys, focus groups enable group interaction and active involvement of participants, thereby allowing greater insight into their experiences and opinions (Krueger, 1994; Morgan, 1997; Kumar, Aaker and Day, 1999). Participants can respond freely and spontaneously, without the limitation imposed by questions offering fixed responses (Krueger, 1994). Consequently, high-quality data with different views and ideas can be generated.

Greenbaum (1993) points out that focus group interviews are flexible in nature and allow for the exploration of participants' responses to certain concepts. According to Calder (1977), exploratory groups represent an explicit attempt to use everyday thought to generate or operationalise constructs and scientific hypotheses.

However, Morgan (1998) points out that although the focused nature of the discussion and the interaction among the participants are sources of strength for focus groups, they are also sources of weakness. One criticism is that focus groups take place in an unnatural environment, as they consist only of interaction in discussion groups and the discussion is directed and 'influenced' by the researcher. Consequently, it might affect the quality of the data (Morgan, 1998). Interacting in a group can, in turn, influence the individual participant's behaviour towards conformity and polarisation.

Role of the Moderator

It is the moderator's job to guide the discussion. The moderator must be adept and experienced in communicating clearly, listening carefully and sensitively, guiding the discussion, encouraging responses from all participants, making participants feel that their responses are valued, and keeping the discussion in line with the aims of the study (Krueger, 1994).

For a series of focus groups, careful preparation is important and involves not only the design of the questions themselves but also the way the questions are organised and introduced to help focus the discussion. Focusing is helped by starting the discussion with a general introduction to the topic, and beginning with more general questions and then progressing to more specific ones (Krueger, 1994; Morgan, 1997).

To ensure a smooth flow, a discussion guide was prepared in advance. It is a list of objectives to be achieved, and topics with relevant questions to be covered by the focus group. The discussion guide serves as a blueprint and as a memory aid for the moderator.

Objectives of the Focus Group Study

In the current research, the focus group is a component of the hybrid methodology to gather information for further study. Focus groups are useful in developing questionnaires (Morgan, 1997, 1998). According to Morgan (1997), there are three basic ways that focus groups can contribute to the development of surveys. Firstly, focus groups help to identify the constructs that must be measured in the survey. Thus, rather than basing the survey on the researcher's own assumptions about what is relevant, focus groups ensure that the researcher understands participants' thinking. Secondly, focus groups are an efficient tool in determining the

variables or dimensions that make up each construct. Finally, focus groups can provide insights into appropriate wording in the questionnaire for the survey. Consequently, focus groups reduce the chances of making errors in creating survey questions and improving validity.

For the current research, a focus group study was used with the aim of defining and refining the constructs of eBanking from the eBanking users' perspective. Specifically, the objective of the focus group study was to explore the following:

- Customers' perceptions of interactivity obtained while using eBanking services
- Customers' perceptions of control while using eBanking services
- Customers' perceptions of involvement while using eBanking services
- Customers' degree of eService encounter satisfaction with and dependency on eBanking services, as affected by the interactivity, control and involvement that occurred during their interaction with the eBanking site
- Customers' degree of overall satisfaction with and loyalty to the principal bank, as affected by their eService encounter satisfaction with and dependency on eBanking services.

The findings from the focus group were also used to define and operationalise the constructs used in the research model. These constructs are interactivity, control,

involvement, eService encounter satisfaction, eService dependency, overall satisfaction with the principal bank and loyalty to the principal bank.

Organisation and Management of Focus Group: Three-Phase Process

In the current research, the focus group study is treated as a process with three phases: planning, executing and analysing data.

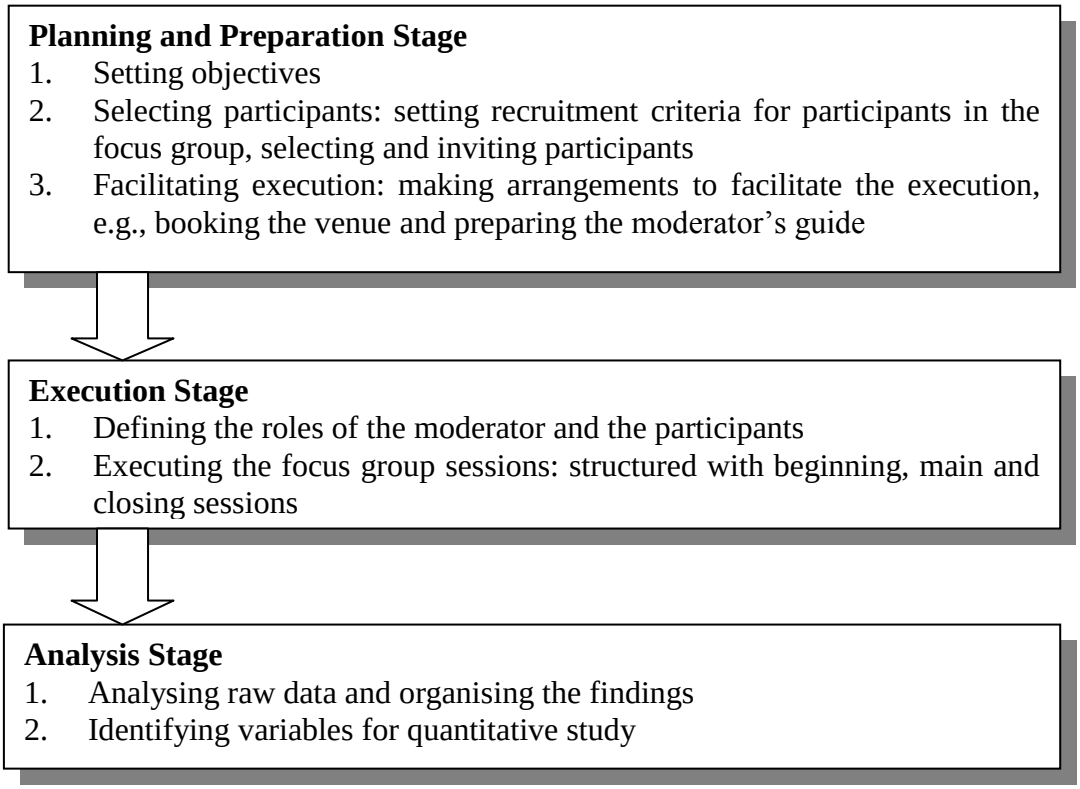


Figure 4.3 The Three Phases of Focus Group Study

Themes and Aims for Focus Groups

As there are four major themes to be studied, and due to limitation of resources, two focus groups were conducted for each theme. A total of eight focus groups were conducted. Table 4.3 highlights the themes and focus of different focus groups.

Table 4.2 Themes and Focus of Each Focus Group

Groups	Theme	Focus
G1 & G2	Interactivity	Interactivity is the basic condition in all service encounters and communication. These focus groups discussed the concept of Internet interactivity, the associated attributes and their significance to the relationship outcome of dependency, satisfaction and loyalty in the eBanking context.
G3 & G4	Control	Control is a construct frequently mentioned in the expert interviews. Customers' control in the customer-eBanking interaction process depends on both system factors and user factors. According to the Technology Acceptance Model, the acceptance of eBanking depends on the users' subjective perception of the system's usefulness and ease of use. These focus groups discussed the attributes related to technology acceptance and control.
G5 & G6	Involvement	eBanking is an activity that is goal-oriented with a high degree of personal relevance in both the cognitive and behavioural aspects. These focus groups discussed customers' involvement in the customer-eBanking interaction from both the cognitive and the behavioural aspects.
G7 & G8	Dependency & eService encounter satisfaction with eBanking; Satisfaction with & loyalty to the principal bank	The relationship outcome of customer-eBanking interaction was explored in these focus groups. In addition to eService encounter satisfaction, satisfaction with and loyalty to the principal bank, dependency was highlighted by eBankers as an important relationship outcome. It reflects the influence of eBanking on customers. Thus it is also discussed here.

Selection and Grouping of Focus Group Participants

Each focus group comprises 7 to 12 participants. Purposive sampling and the availability approach were used in selecting participants. All participants are part-time MBA students at a university in Hong Kong. Using eBanking services was the condition set for all potential participants.

Potential participants were informed of the objectives of this research in advance. Those who were available for the interview were given some background information, and they were asked in advance their preferred eBanking service providers and their preferred banking options, for initial analysis.

Each focus group session started with an introduction which stated the purpose and aims of the study. The confidentiality of the discussion content was also stressed. It was emphasised that participants should give their honest opinion and should express what they really think and feel. The findings and analysis of the focus group study are discussed in Chapter 5.

Formulation of the Research Model

A model can be described as a framework illustrating the relationships among theoretical propositions. It is presented in the form of a diagram to specify the causes and consequences or the relationships among variables. By generalising the findings and information collected from interviews with eBankers, the focus group with

eBanking customers, and the relevant literature, a research model is then proposed. It is in the pre-theoretical stage, as it requires further exploration and testing. In this research, further exploration and testing represent the use of a quantitative study to collect data and use of statistical tests to confirm the significance of relationships between the constructs in the model. Chapter 3 (Conceptual Development) discusses the development process of the conceptual framework, the hypothetical relationships of the constructs and the hypotheses in detail.

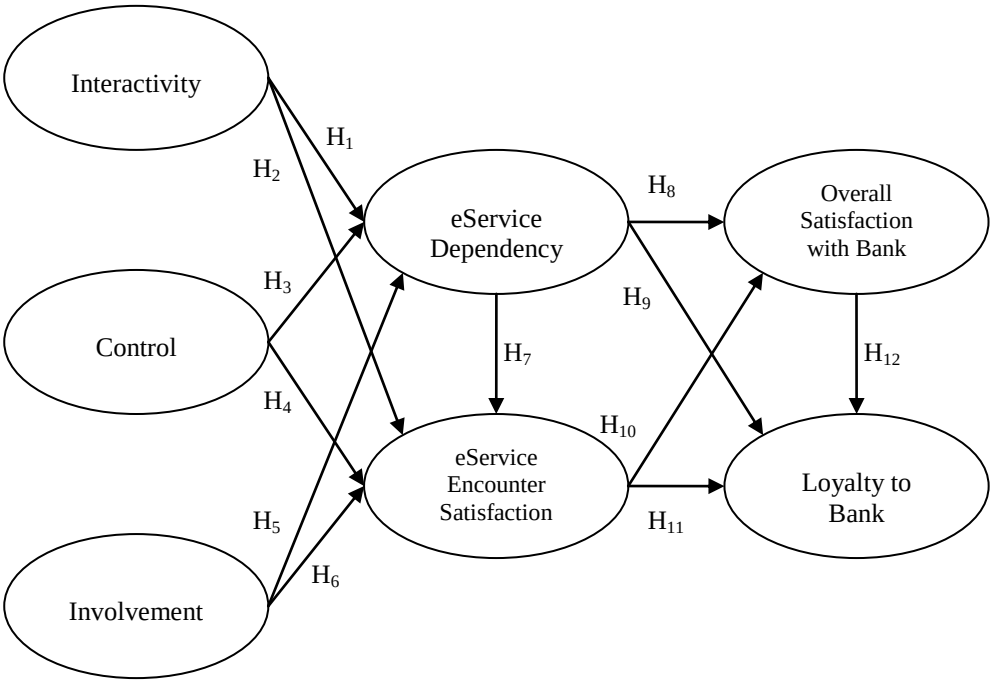


Figure 4.4 Theoretical Model of eService

Questionnaire Survey

As discussed in the previous sections, data from expert interviews and focus group studies are helpful in obtaining an in-depth understanding of a phenomenon but cannot be generalised to validate causal relationships between constructs. In order to develop a model to theorise the impact of Internet-user-determined factors on customer satisfaction-loyalty in the context of eBanking, sufficient quantitative data are required to determine the significance of relationships between constructs.

A questionnaire survey represents the most common mode for quantitative data collection in marketing, because of its flexibility and adaptability to a variety of research designs, populations and purposes. As it is a standardised device that elicits from a respondent the answers to a list of prearranged questions in a specific order, it is well suited to collecting a large amount of quantitative information. Based on the large amount of quantitative information, the patterns, trends and relationships of constructs and variables can be tested. Oppenheim (1992) points out that the function of a questionnaire is measurement; it helps with the measurement of the significance of the relationships between constructs for this research.

For the current research, the constructs and variables in the questionnaire were based on the expert interview and focus group studies, with reference to relevant research. Those findings were then used to create appropriate sets of questions.

Although fixed-response questions have been criticised for forcing respondents to choose answers from the possibilities provided rather than answering in their own words, these questions are more specific than open-ended ones. They communicate the same frame of reference to all respondents, and well-designed response categories can more accurately detect differences among respondents (Converse and Presser, 1986).

Design of the Questionnaire

Design principles for questionnaires are well documented (e.g., Oppenheim, 1992; Converse and Presser, 1986). As it is an interviewer-administrated questionnaire, the content is respondent-centred to facilitate answering. The format and layout are interviewer-centred to facilitate filling in the respondents' answers. In order to ensure the questionnaire functioned as intended, the following design principles were applied:

- The areas and items included follow previous research with modifications based on the findings from the expert interviews and the focus groups.
- Items must be related explicitly to particular analysis objectives.
- Items must be clearly understood by the survey respondents.
- Items must ask for factual information or attitudes that respondents can recall from memory.

- Items must avoid response bias or other negative influences on respondents.
- Items must be an appropriate length for completion by respondents.
- Items must be formatted in a way that makes them useful to the interviewer and the respondents.
- Items must be formatted in a way that minimises entry errors.

Structure of the Questionnaire

The questionnaire is divided into four sections. The first section investigates the eBanking usage situation. It focuses on the following areas:

- The length and frequency of eBanking usage
- The eBanking service that respondents are using, its association with the respondents' principal bank, and the users' relationship status with the principal bank
- The significance of eBanking to the customers in its dominance as a major means of communication and service acquisition with the bank.

In total, there are 10 questions in this section.

In section two, 15 statements were developed to measure the eService constructs on customer-eBanking interaction. The constructs are:

- interactivity
- control

- involvement.

In section three, another 12 statements were developed to measure the satisfaction and loyalty level of the users towards eBanking service and the principal bank:

- eService encounter satisfaction
- eService dependency
- overall satisfaction with the principal bank
- loyalty to the principal bank.

A Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used for sections 2 and 3.

The last section requested general information about demographics. There are 7 questions in total. The questionnaire is in Appendix C.

Operationalising the Constructs

Constructs are operationalised by selecting appropriate indicators and scale type. Most of these indicators are developed by modifying the existing indicators used by previous research studies. This approach has the advantage of a high degree of specificity and validity.

The indicators developed for *Interactivity* (*ITA*) are based on Liu (2003). The indicator items developed for *Control* (*CNT*) are mainly based on Venkatesh and

Davis (1996), Devaraj et al. (2002) and Novak et al. (2000); some items are newly developed. The indicator items developed for *Involvement* (*IVM*) are based on Webster et al. (1993), Ghani and Deshpande (1994) and Childers et al. (2001). The indicator items for *eService Dependency* (*EDP*) are newly developed based on Patwardhan and Ramaprasad (2005), and Patwardhan and Yang (2003). The indicator items developed for *eService Encounter Satisfaction* (*ESAT*) are based on Keaveney and Parthasarathy (2001). The indicator items developed for *Overall Satisfaction with the Principal Bank* (*SAT*) are based on Keaveney and Parthasarathy (2001), and Hu and Yang (2006). The indicator items developed for *Loyalty to the Principal Bank* (*LOY*) are based on Ganesh et al. (2000) and Sudhahar (2006).

Appendix D presents the constructs, its measurement items and sources in a table format systematically.

Language of the Questionnaire

The questionnaire was originally developed in English, but Cantonese was used in the actual data collection. Back translation process is used to ensure the reliability of the questionnarie. The questionnaire in English was translated into Chinese and then translated back into English, in order to ensure the English version and the Chinese version of the questionnaire are identical. Two interpretors, one for Chinese translation and one for English translation, were used in this process. There

were some minor changes in the wording of the Chinese version in the translation process.

Face Validity and Pilot Test

As constructs and indicators were modified or newly developed, a face validity test was conducted in which four independent judges were invited to participate. Two of them are academics from business management and two are eBanking customers who have postgraduate education. They were given the definitions of the constructs and then asked to match the indicators with the construct names. Most of the indicators were correctly matched to the respective constructs, except seven. Another face validity test with one academic and one eBanking customer was conducted after these seven indicators were deleted. As no judge had difficulty in matching all items to constructs this time, the face validity of the indicators was then confirmed.

A pilot test was conducted before the execution of data collection. It aimed to evaluate the clarity and appropriateness of the wording and questions in the questionnaire. It also helped to examine the reliability of the questionnaire.

Two pretests were conducted. The first was conducted in a focus group consisting of six part-time MBA students. They were asked to complete the questionnaire and then asked to evaluate it and give opinions and comments

regarding its general clarity. In general, all students felt that the questionnaire was clear and easy to understand. Based on their feedback, some words were replaced and some questions were rephrased for clarity.

The second pretest was conducted with another 46 part-time MBA students at the same local university. They are currently eBanking customers. The purpose of this pretest was to examine the reliablity of the instrument.

After the face validity test and pilot test, the questionnaire was deemed ready for data collection.

Telephone Survey and Sampling

The data were collected by means of a questionnaire completed by telephone interview. The questions were posed verbally by trained interviewers. All responses from respondents were directly put into the computer during the interview. In order to minimise variation caused by the interviewers, a standardised interview procedure was set to ensure that all interviewers presented the questions in the same manner.

A telephone survey is a very common type of marketing research, partly because good samples can be achieved at reasonable cost. It is also appropriate for a large number of samples.

The sampling frame was current eBanking customers in Hong Kong. As it is impossible to acquire the complete list of eBanking customers, the telephone

directory was used as the sampling frame. The random sampling method was used to select samples. The major advantages of such an approach are that the execution cost is relatively low, the sample is representative of the population, and non-response bias should not be present.

However, the use of the telephone directory as the sampling frame might have three major problems: exclusion of households without a telephone, exclusion of unlisted telephone numbers, and exclusion of telephone numbers that are issued after the publication of the telephone directory (Blankenship, 1977; Glasser and Metzger, 1972; Moberg, 1982; Tyebjee, 1979).

The situation of exclusion of households without a telephone should not be a problem for the current research. According to the Hong Kong SAR Government Census and Statistics Department (2008), the household fixed line penetration rate in Hong Kong is 100.3%. Thus there is a very low possibility that a household is excluded from the sampling. The problem of excluding the unlisted telephone numbers was overcome by the use of random numbers to replace the last two digits of the telephone number drawn out from the telephone directory. The latest edition of the telephone directory was also used to avoid the problems of out-of-date listings.

The Telephone Sampling Process

The Chinese computer-aided-telephone interviewing (CATI) system was used to generate phone samples created from the Hong Kong Telephone Directory from the telephone pool of households in Hong Kong, Kowloon, the New Territories and Lantau Island. After the phone samples were automatically generated, the last two digits of the telephone numbers were then replaced by two random numbers. When the phone was answered, the question regarding the number of family members 18 or above using eBanking was asked. If there was more than one adult family member using eBanking, then the CATI system randomly selected one of them to participate in the survey.

Data Analysis

After the data were collected, statistical analysis was applied to verify the structural model. Due to the complexity of the proposed research model, the SEM approach was used to test the validity of the model. This procedure allows a researcher to test the proposed structure of a model as a whole for the set of relationships between dependent variables and independent variables. In order to conduct the analysis systematically, the six stages in structural equation modelling proposed by Hair, Black, Babin and Anderson (2010) were followed:

1. Defining individual constructs

2. Developing and specifying the overall measurement model

3. Designing a study to produce empirical results

4. Assessing the measurement model validity

5. Specifying the structural model

6. Assessing the structural model validity.

The first three stages have been briefly discussed in the previous sections. Chapter 6 (Quantitative Data Collection, Analysis and Findings) presents a complete and detailed explanation of these six stages of analysis and their application to the current research.

Summary and Conclusion

In this chapter, a discussion of the research philosophy led to the adoption of a hybrid methodology incorporating both the positivist and phenomenological perspectives. Thus both qualitative and quantitative analyses are conducted to study the relationship between Internet communication attributes and customer satisfaction and loyalty.

In order to present the thesis with higher readability and to maintain clarity, each part of the research methodology is presented along with the corresponding findings in a distinct chapter format. The rest of the thesis is organised as follows: Chapter 5 serves as a complete report and analysis of the findings from in-depth

expert interviews with eBankers and the focus group study with customers. Chapter 6 provides a complete report and analysis of the survey research results. It also looks at the proposed relationships and their validity. Chapter 7 is the conclusion and implications from both the theoretical and empirical aspects.

CHAPTER 5

QUALITATIVE DATA COLLECTION, ANALYSIS AND FINDINGS

Due to the complexity of the current research and the relative newness of the research area, a combination of qualitative and quantitative methods is used. In this chapter, a qualitative study of eBanking services is used to identify the customer-eBanking Internet interaction attributes and the associated relationship outcomes, based on the views of eBankers and eBanking customers.

A qualitative approach is adopted for its effectiveness to explore and capture the views and opinions of the interviewees. As there is a lack of research on what and how the Internet interaction attributes of eService affect customer satisfaction and loyalty, the qualitative approach is appropriate. The banking industry is believed to be an appropriate industry for study because of its extensive application of the Internet in customer communication and service delivery.

The results, along with the literature review, provide a base for developing the theoretical framework and facilitating the development of the survey questionnaire. The survey questionnaire was used to collect quantitative data to test the hypotheses and to validate the theoretical model proposed.

The current research is actually an attempt to address the challenge of how to analyse and measure customers' experience of using eBanking as a communication and transaction medium. Expert interviews with eBankers and the focus group interviews with eBanking customers will help to identify the customer-eBanking Internet interaction attributes and their impact on service encounter satisfaction, overall satisfaction and loyalty to the service provider. It is believed that eBankers and eBanking customers have first-hand information regarding the usage situation, usage experience of eBanking, and the associated outcomes.

The qualitative study serves the following objectives:

- To understand customers' usage behaviour and experiences of eBanking in general.
- To identify the customer-eBanking Internet interaction attributes that affect the usage of eBanking from the eBankers' perspective and the eBanking customers' perspective.
- To explore the impact of interaction experiences of eBanking customers on eService encounter satisfaction, customer satisfaction and loyalty.

Data Collection Process in Brief

As a first step, eBankers were interviewed individually to obtain preliminary information about eBanking and customers' eBanking usage and experience. The exploration focuses on the interaction attributes of the Internet and eBanking and their impact on customer satisfaction and loyalty. Then, based on their information and insights, focus group studies were carried out to further define those identified attributes and their impacts.

On the basis of the information obtained from expert interviews, focus groups and the literature review, a number of hypotheses and a research model will be proposed. A survey will then be conducted to test these hypotheses and validate the marketing communication model of relationship building in an eBanking context.

In-depth Expert Interviews with eBankers

Four in-depth interviews were conducted. Four eBanking executives involved in the formulation, development or implementation of eBanking were interviewed. They are familiar with the planning and implementation issues related to eBanking. They are also experienced in customer management and understand their behaviour of eBanking usage to a certain extent. They have first-hand eBanking customer usage information, as they can access their internal market research and intelligence. Two of them are working in multinational banks and the other two are working in local

banks. These banks have retailing banking networks in Hong Kong and offer eBanking services.

According to their request, the interviewees' names, positions and associated banks' names are kept anonymous for their benefit and that of the banks and customers. Thus they are called eB1, eB2, eB3 and eB4 to represent their identity.

Outline of the Discussion and Findings

The areas and outline of the discussion during the interview were identified and prepared in advance. However, some areas with special interest and importance might have been further discussed during the interview, depending on the response and insight obtained during the interview. Following the objectives of the expert interviews of the research, the main areas of discussion include:

- The significance of eBanking to the eBanking service providers
- The criteria of successful eBanking service
- The eBanking strategy
- The factors contributing to the satisfaction with eBanking service
- The characteristics and behaviour of eBanking customers
- The relationship between eService dependency, eService encounter satisfaction, overall satisfaction with the principal bank and loyalty to the principal bank.

The following sections discuss the findings.

Challenges and Opportunities of eBanking

It is realised that eBankers and their banks are facing a lot of challenges and uncertainties in the eBanking arena. However, they are also trying to turn these challenges into opportunities. Leaders in eBanking services, such as HSBC and Standard Chartered Bank, are finding growth and profitability through building deeper relationships with prosperous, sophisticated eBanking customers.

In general, eBanking users look for convenient, fast and advanced eBanking services. Banks are also using the Internet as a channel of communication, transactions and relationship building.

> "Practitioners in the Internet field, executives of the banking business and heavy Internet users believe that the Internet will revolutionise banking. The Internet has a double-edged effect on retail banking." *eB4*

> "eBanking will not only have significant effects on the structure and performance of the banks, but it will also alter customers' usage patterns and banking behaviour." *eB2*

> "The Internet is seen as something that the banks cannot ignore, but from which it will be difficult to actually make easy money." *eB3*

> "The opportunity lies in driving more customers to eBanking to take advantage of its benefits, to meet their needs continuously, and to make them happy with our service, no matter whether via electronic means or other channels. If banks are able to satisfy customers with a favourable eBanking experience, there will be more and more satisfied and loyal customers. Increasing the adoption of eBanking will then reduce the cost required to serve customers and enhance the operational efficiency." *eB2*

> "eBanking also leads to higher development costs for new products, accelerated homogenisation of banking products, more competition from

nonbanks, higher customer expectations, and more opportunities for empowered customers to click away to another site." *eB1*

"Conservatively speaking, eBanking is another means used by the banks and their customers to communicate with one another. It might be a new type of ATM, telephone banking or home banking. Or at the other end, it might be an innovative means driven by the Internet to enhance the communication and relations with the customers. It really depends on how the banks develop this means and how the customers adopt it. We have to allow eBanking more interactive, more informative and more personalised, and get customers involved in and responsible for the service process." *eB3*

The above are direct quotations from the interviewed eBankers. Their statements show that eBanking still has a lot challenges and uncertainty ahead. However, they also firmly believe that it will indeed unleash tremendous changes in the banking sector. These changes might also mean market opportunities.

eBanking Strategy

During the interviews, it was revealed that eBankers and their associated banks keep on modifying their eBanking strategy. Although a complete elaboration on their eBanking strategies is not done, the following quotations show part of the picture.

"Our bank is actually devising new ratings frameworks for our eBanking development initiatives, which will impact our earnings capability, such as level of online service, reliability, speed, innovation, and customisation of products." *eB3*

"In fact, we are still working to improve this eBanking model. We will keep on modifying the model to strengthen its communication, interactivity and transactional capability, in order to achieve our value

objective for customers, and revenue and logistics objective for ourselves." *eB4*

In general, it is believed that banks are actually adopting "learning by doing" and "trial, error, correct and improve" approaches in developing eBanking strategy and service. eBanking is still in the process of evolution, and customers are developing their behaviour with eBanking. Table 5.1 summarises and highlights the eBanking strategies of respective banks.

Table 5.1 eBanking Strategies

Strategy	**Details**	**Attributes**
One-stop banking service with total experience	"Our eBanking uses One-stop Banking Service with the Total Experience concept. It enables customers to resolve any kind of banking enquiry and banking activity, including deposit advice, reviewing product pamphlets, loan advice and foreign exchange trading, so that they can have the same impression as visiting the actual bank." *eB3* "As a result of innovations in technology, the bank has developed new offerings to cater to customers' needs and further enhance users' eBanking experience. Our regional eBanking platform was introduced in 2004. Such an enlargement of the eBanking platform is in line with the bank's vision to build an interconnected Asian financial franchise. The platform consolidates the eBanking services in Singapore and Hong Kong, which are the major financial centres in Asia. It also	● Comprehensive functionalities ● Favourable usage experience

	realised the aim of the bank to consolidate its competitive position in the Asian region and to match the globalised financial environment and globalised clientele. This enlarged platform reduces the bank's operational risks and costs. With this platform, customers can complete their transactions at a much faster speed. They can also navigate freely for more information from different sources." *eB3*	
Differentiation by comprehensive functionalities and enjoyable usage experience	"Simply, an eBanking service cannot be a differentiation from competitors. To differentiate, it is about the breadth and depth of functionality that eBanking is offering, and the intuitive way in which the eBanking application performs from the perspective of customers. Thus we are improving our eBanking with two directions: comprehensive functionalities and enjoyable usage experience." *eB1*	• Comprehensive functionalities • User-friendly • Enjoyable usage experience
Differentiation by personalisation and integration of services	"We are working to tailor-make our service to specific needs of different customer segments…We will differentiate ourselves from existing players through image, culture, products, service, and integrated and personalised approach to customers. All these contribute to the formation of a satisfactory experience of eBanking." *eB2*	• Personalised service • Integrated service • Satisfactory experience

Dependency	"We have to develop a more user-friendly and powerful interface for customers, allowing them get used to and depend on eBanking to manage their accounts themselves." *eB2* "It is our business direction that is moving more services online, offering a user-friendly environment for customers to serve themselves." *eB4*	• User-friendly • Dependency

Based on the above analysis of strategies, it is found that eBankers are really focusing on certain attributes to be built into the eBanking service in order to differentiate themselves from competitors:

- Comprehensive functionalities
- User-friendliness
- Personalisation of eBanking service
- Enjoyable usage experience
- Satisfactory usage experience
- Dependency on eBanking services

In the interview, interviewees agreed that customers are very accepting of the Internet and eBanking as a medium of communication and transaction. They also believe that eBanking is changing customers' banking behaviour. It is also important to highlight that, as a significant proportion of eBanking users are experienced users

of the Internet and other eServices, they have high expectations of the eBanking service in terms of the service delivery process as well as their determinative role in the interaction and transaction process. If eBanking service cannot meet their expectations, their satisfaction and loyalty to their principal bank will probably be affected.

The following section further explores the eBankers' views on eBanking's impact on eService encounter satisfaction and the subsequent impact on overall satisfaction and loyalty to the principal bank. In addition, it has been found that customers' eService dependency might influence eService encounter satisfaction, which might contribute to overall satisfaction and loyalty to the principal bank.

eService Encounter Satisfaction in the Eyes of eBankers

In general, eBankers really believe in the importance of customer satisfaction and loyalty. In the eyes of eBankers, customers' eBanking experience probably contributes to their encounter satisfaction and dependency on eBanking. It also contributes to the satisfaction with the overall banking service and loyalty to the bank.

> "Customer satisfaction is one of the key indicators used by our bank to assess the success of our services, including eBanking. eBanking is still in growth mode, so banks have plenty of opportunities to make use of eBanking as a strategic tool to acquire or retain customers. eBanking with its website and services is an important tool to enhance customer satisfaction and their loyalty." *eB2*

> "We are not the market leaders having the highest enrolment. In the coming 12 months, it is our goal not only to increase the number of customers who use our eBanking but to improve the service to enhance eBanking customers' satisfaction and loyalty. By using the Internet as an interaction and a transaction channel, the bank would like to transform this segment to have the most satisfied and loyal customers." *eB4*

In the interviews, eBankers mentioned that eBanking has to achieve communication volume and transaction volume in order to justify their investment and to achieve economy of scale for lower cost per transaction, and system development and maintenance. Thus it is also essential for them to build up a segment of eBanking customers who are satisfied and loyal. Such a segment is also the source of profit. In a later section, examples are quoted to illustrate the process of building satisfaction.

It is worth looking at customer satisfaction with services on two levels: the overall satisfaction with the principal bank at corporate level and satisfaction with the eBanking service encounter at service encounter level. eBankers look at the eBanking service with greater attention, as eBanking is relatively new to the market and to them. It also has strong potential to grow and room to improve. This view is actually in line with the analysis of satisfaction from an academic perspective.

The following section analyses eBankers' view of the process of building up eService encounter satisfaction via the eBanking platform.

The Process of Building eService Encounter Satisfaction

It can be seen that eBankers really believe in the cultivation of satisfaction. Satisfaction cannot be realised on a single or independent occasion but is a process to be built up. eBankers believe that eBanking is a relatively new mode of communication and transaction driven by technology, so customers have to go through the adoption process and build up satisfaction through various encounters. Such encounters include the initial visit to the eBanking site, getting familiar with eBanking services, registration for the service, trial usage for information gathering, confirming the usefulness, and accepting the usage for transactions and communication.

> "Such an incremental process shows that eBanking customers are satisfied with the eBanking services (i.e. the eService encounter satisfaction). Users usually use eBanking as the source of information first. Then later on, they use eBanking as the transaction medium. The process illustrates that once users believe that eBanking is a reliable and efficient source of information, they will use it for transactions. They must be satisfied with the functions offered and the experience they had. If they are not satisfied, they are not going to use it again and again, or use more and more functions." *eB2*

The most common type of transaction activity, according to eBankers, is bill payment and share trading. The following section uses bill payment as an illustration to show the process of satisfaction building to eBanking. eTrading is illustrated and discussed in a later section.

Bill Payment Illustrates the Process of Building eService Encounter Satisfaction

In line with eBankers' thinking, it is logical to believe that in order to enhance eBanking usage and then the satisfaction level of customers, eBankers have to start by building up eBanking as a strong information source. The significance of an eBanking site as an information source is discussed in another section of this chapter.

Once customers depend on eBanking for information, eBankers take the opportunity to transform the "online information seekers and gathers" to "online transaction executors". Online bill payment is a good starting point to motivate customers to adopt eBanking as the communication and transaction medium with banks.

> "We have to transform information seekers to online bill payers who will then become regular and active users of eBanking. In this process, customers' satisfaction and loyalty to the bank will also be built up. Upswing in satisfaction is vital for us because it is highly correlated to the purchase of additional products and services. It then explains that in the past two years, we and other banks have put great effort into marketing and promotion to stimulate eBanking customers to pay their bills via eBanking. The campaigns are all very successful." *eB2*

> "Bill payment is one of high priority banking tasks of eBanking. Banks are using bill payment as the motivator to customers to enhance their usage rate of eBanking as a transaction platform. Now, online bill payment is a core and well-accepted function by both the bank and the customers." *eB3*

> "Bill payment is a typical example to show the adoption process of eBanking service. As bill payment is a 'must-do' activity for customers, we must help them to pay bills via eBanking in order to build up their usage and habit. If they use eBanking regularly, they will become more skilful and able to control the whole transaction process. Customers will then depend on it for more different kinds of banking and financial activities. They will also be more satisfied with our eBanking service." *eB2*

The above quotations show that bill payment is an effective tactic to create customers' eService dependency and also eService encounter satisfaction. In the section on Online Bill Payment as an Illustration of Push Factors, the reasons for the increasing popularity of online bill payment are also discussed.

Attributes Contributing to eService Encounter Satisfaction

Based on the illustration of online bill payment, it can be seen that eService encounter satisfaction with eBanking is derived from a series of interrelated elements. The following quotations (see Table 5.2) highlight the attributes contributing to eService encounter satisfaction.

Table 5.2 eBankers' Views on eService Encounter Satisfaction

Quotations on eService Encounter Satisfaction	**Attributes Leading to eService Encounter Satisfaction**
"Satisfaction with eBanking is driven by the convenience of using the Web for conducting banking tasks, such as bill payment. There is no charge or relatively low charge to conduct various transactions, and incentives for some activities. On the eBanking site, users are free to navigate and to choose information and service options. This should be a wonderful service to customers." *eB1*	• Convenience • Low cost • Incentive • Free to navigate • Free to choose
"The smoothness of the eBanking process drives satisfaction…For smoothness, I mean that customers can do the transaction themselves, such as bill payment, easily, without any difficulties, step by step with simple and clear instructions in a user-friendly environment." *eB2*	• Self-responsibility • Self-completion of transaction • Ease of use • Simple and clear • User-friendly
"eBanking is one of our service options and customers are free to use any options. Customers will choose the option that they are satisfied with. Then satisfaction can be reflected by the usage frequency of eBanking… We determine usage in three aspects: the usage of eBanking as the source of information, the usage of eBanking as a communication channel and the usage of eBanking as a transaction medium. Establishing the usage behaviours is actually a process to build up satisfaction with eBanking service." *eB3*	• Frequent usage of eBanking • eBanking as an information source • eBanking as a communication channel • eBanking as a transaction medium
"Bill payment allows users to feel the benefits of using eBanking themselves. With basic skills in using the Internet, users set the command and get instant responses from the system. Such an interactive experience is different from face-to-face interaction. Users are responsible for the banking process. We offer the platform while users log on and start participating in the whole banking process." *eB4*	• User command • Instant responses • Interactive experience • User responsible • Participation in the eBanking process

Table 5.2 shows the eBankers' view of eService encounter satisfaction. The attributes that drive eService encounter satisfaction are also identified. These attributes are further examined in the focus group discussion with eBanking users.

eService Encounter Dissatisfaction

However, service encounter dissatisfaction is also common.

> "Sluggish site response may be tolerable, but only to a certain extent. However, poor or unstable site performance or even breakdown in critical applications that cause incomplete transactions will lead to customers' dissatisfaction or their reverting to traditional channels." *eB1*

> "Poor system performance of eBanking will raise operational costs, such as higher cost of customer service to handle customers' phone calls or complaints. Thus, the loss of business opportunities or the loss of market share will be a possible consequence." *eB3*

According to the eBankers' views, dissatisfaction is mainly caused by poor site performance. The immediate outcome of poor site performance is that the transaction cannot be completed. It also implies that users' expectations cannot be met, and it leads to dissatisfaction.

Dissatisfaction is the feeling of disappointment resulting from comparing the perceived performance or outcome to customers' expectations (Kotler and Keller, 2006). Bougie, Pieters and Zeelenbarg (2003) point out that customers experience dissatisfaction because of waiting for service and failure of core service. Johnston (1995) highlights that responsiveness is a key component in providing satisfaction.

The lack of it is the major source of dissatisfaction in banking services. All their views are in line with eBankers' views on eBanking customers' dissatisfaction.

The most common outcomes of dissatisfaction are direct complaints, third-party complaints, switching, boycotts and negative word-of-mouth. Customers have three options when they experience dissatisfaction, according to Hirschman's (1970) Model of Exit, Voice and Loyalty (EVL). Customers choose the exit option will discontinue the relationship with the current service provider and switch to another one. Voice option represents that the customers voice out their dissatisfaction with an aim to improve the condition. Loyalty is a passive option which means that the customers stay with the existing service provider in anticipation that the situation will improve. Rusbult, Zembrodt and Gunn (1982) add the fourth option of neglect. The options of voice, loyalty and neglect also illustrate the problem of choosing exit by customers – the high switching barriers in banking services.

In fact, it is not uncommon for eBanking customers to experience dissatisfaction and they might have adopted different behavioural options as a reaction. However, Shankar et al. (2003) argue that eService customers understand their autonomy to choose freely their favourable service provider from various offers in a highly transparent Internet environment. Thus customers believe that they are partly responsible if the chosen service does not fully meet their expectations. Such

belief mitigates the impact of their dissatisfaction experiences.

Although it is not the focus of the current research, dissatisfaction and switching barriers in the eService context are worth further study.

Outcome of eService Encounter Satisfaction

All interviewed eBankers believe that eService encounter satisfaction contributes to additional purchases via eBanking. In line with various research findings, service encounter satisfaction also contributes to overall satisfaction and loyalty.

Dependency

A new finding identified is customer dependency on eBanking. The concept of dependency is discussed in this section and in the literature review chapter.

One of the interviewed eBankers, eB2, has a different and strong view that eBanking service strengthens the relationship between the customer and the bank. He believes that interaction contributes to relationship building, no matter whether it is face-to-face interaction or electronic interaction. He emphasises that eBanking provides easy access to transactional capabilities and allows self-directed account management by customers. It allows customer control on the communication and transaction process in a convenient and user-friendly manner. Once eBanking usage becomes their lifestyle, the customers will have a dependency relationship with

eBanking. Such a dependency relationship will enhance the loyalty of customers to the principal bank. However, the prerequisite is that the bank has to offer good eBanking service. The following quotations from eBanker eB2 show his "dependency" view clearly.

> "In retail banking, we traditionally focus on branch banking plus face-to-face interaction. We realise that the better the relationship between the customer and the banker, the higher the degree of dependency of the customer to the banker. The customer will seek advice from the banker more frequently, and will depend on the banker while making decisions about loans or investments. In eBanking, as a result of such a large number of interactions with customers via the Internet, we expect our eBanking customers will be very dependent on us and our eBanking for service."

> "Banking service is now a multi-channel experience. Customers use multiple channels to connect with the bank but may develop a preferred channel for particular transactions. eBanking has advantages over the other channels, partly because of its integrative and multifunctional characteristics and partly because of customer factors, such as their technology-prone characteristics. They enjoy the navigation and self-control experience while surfing the Net, no matter whether for fun or for work. Once they have a strong dependency tendency on the Web and the relevant applications, eBanking should be the one they prefer."

> "eBanking's multifunctional capability is powerful enough to help customers to solve, if not all, a lot of banking or financial tasks. I am very confident that later on, eBanking can handle all the banking tasks for customers. Customers will be more dependent on eBanking."

> "If more functions are performed online, then the higher the degree of dependency on eBanking of the customers, the more satisfied and loyal the customers will be."

The concept of dependency was discussed in other interviews with eBankers. The following quotations are their responses.

> "I believe that personalised service will enhance customers' usage experience and their dependency, because we are offering what they need." *eB3*

> "Probably, to have or to help customers develop the habit of using eBanking will be very important. Just like logging on their Google or Yahoo account, just like checking their email, we have them believe that using eBanking is normal and part of their life. We allow them to depend on the Internet and eBanking to manage their finances. Customers will be more satisfied with our eBanking service." *eB3*

> "In the US, customers are now using financial management software integrated with their eBanking account for better management of personal finance. It can also enhance customers' dependency on eBanking … We might work to build up a sense of dependency in the mind of customers, to have it be part of life that cannot be given up. That will be great!" *eB4*

> "At least, they will habitually depend on eBanking for some core services. They will also depend on eBanking as a source of latest information and personalised financial services." *eB4*

Based on these views, it is logical to believe that eService dependency might contribute to eService encounter satisfaction.

Overall Satisfaction with the Principal Bank

The concept of overall satisfaction is discussed in the literature review chapter. In the current research, it is argued that eService encounter satisfaction and dependency contribute to overall satisfaction with the principal bank. Being one of

the interaction and service options offered by the principal bank, when customers are satisfied with eBanking encounters, such eBanking service encounter satisfaction should contribute to the overall satisfaction with the principal bank.

> "Our bank has conducted customer satisfaction surveys regularly. eBanking is one of our service options offered to customers. We believe that it contributes to the satisfaction with the bank as a whole. Comparing the satisfaction level of eBanking users and non-users, the level of satisfaction is slightly higher among eBanking users. In fact, such a small difference is quite unexpected. There is a far higher level of interaction achieved among eBanking users with us, and we believe that frequent interaction will bring benefits in the long run, such as loyalty and a better relationship." *eB2*

> "Maybe it is telling us that eBanking is one of the service options that is equally important as or similar to other options. It contributes, together with other service options, to customer satisfaction with the bank. If the online relationship is handled more effectively, then levels of satisfaction and loyalty can be far higher." *eB2*

Additional Purchases

Research supports the notion that customer satisfaction positively affects purchasing behaviour. The findings from the eBankers' views also support this.

> "It is our experience that satisfied customers using traditional channels are more likely to purchase more products and services than others customers. The same logic can be applied to eBanking. When eBanking customers are satisfied with eBanking services, they are more likely to purchase additional products and services than other customers." *eB2*

> "Frequent users are usually more likely to purchase more products or services than casual users of eBanking." *eB1*

Thus additional purchases might also be an indication of satisfaction.

Loyalty to the Principal Bank

Analysis of customer satisfaction provides insights into the attitude and future behaviours of eBanking customers, such as loyalty. There are different views regarding the impact of eBanking on customer loyalty, and not all interviewed eBankers support the relationship between customer satisfaction and loyalty, especially in the eBanking context.

One of the eBankers, eB1, believes that eBanking doesn't help to build customer loyalty. His argument is based on the situation that the Internet is a highly transparent medium. Price and return of financial services of different banks can be easily assessed; thus eBanking customers will shift to other banks simply because of higher interest rates on savings or lower transaction costs. Such transparency in price and service offerings discourages customer loyalty. Customers can easily compare, choose and shift.

The dominant view of eBankers is that eBanking can create more loyal customers by offering multiple financial services and maintaining frequent interaction through eBanking websites.

Understanding Loyalty

There are different understandings regarding loyalty. This section summarises views from the interviewed eBankers.

> "Loyalty means the number of products customers hold in our bank, and how long they have held these products. However, these relationships do not necessarily mean profitability." *eB1*

> "We have compared the number of accounts and financial products held by our eBanking customers with those of non-eBanking customers. On average, eBanking customers hold accounts at three different banks, while non-eBanking customers hold accounts at two banks. Also, eBanking customers hold more products. While eBanking customers hold an average of six types of financial product, non-eBanking customers hold three. Holding more bank accounts and more financial products proves the promiscuity of eBanking customers. There is a possibility that they are less loyal, as they easily switch to other banks. However, it is common for a customer to have a savings account and a current account in one bank, a mortgage account in another bank, and a personal loan account in a third bank. It might not be a question of loyalty but simply the customer's preference for the best offer. The price will affect the choice in the end." *eB1*

> "For us, loyalty is the outcome of a well-developed customer retention programme. Retaining customers depends on our communication with them, depends on our stimulation to keep them active to get in touch with us. For eBanking, active means, at least, our customers visit our website, and access it for information or transactions. We need to have a set of loyal customers we can make a profit on." *eB3*

> "Customers using eBanking have less attrition in comparison with using other channels of banking and are relatively loyal customers." *eB4*

In fact, split banking is common among customers. Although eBanking customers hold more bank accounts and more products, it is still to be confirmed whether or not holding more accounts and products by eBanking customers represents more loyalty or less loyalty. Further exploration of this aspect is required. eBankers have diverse views regarding eBanking's impact on loyalty to principal

bank. The following section highlights their views.

eBanking Strengthens Loyalty

> "It is our aspiration that their satisfaction and loyalty will improve, as we assume that eBanking is the improvement of services to our customers." *eB1*

> "Customer loyalty is strengthened by positive online relationships. This is particularly true if the site's content and tools are deemed valuable, and critical applications perform at good levels." *eB2*

> "We are always working with the aim of retaining existing customers and acquiring new customers. Competitive eBanking offers are more attractive to customers and probably will encourage switchers from other banks. Better offers mean more functions and better pricing. They will keep the customers and maintain their loyalty." *eB2*

> "Based on our intelligence, we realised that eBanking boosts customer loyalty. eBanking customers are more loyal, as they give the principal bank a higher priority when they purchase an additional financial product. This reflects the possibility that eBanking may already be an implicit signal of satisfaction with the bank." *eB2*

> "Certain functions, such as eTrading, can keep customers. Of course, we need to have an eTrading platform with powerful trading capabilities and support. A very high percentage of our eBanking users use eTrading services, and they are frequent users of eTrading since we launched eTrading in 2004." *eB4*

eBanking Degrades Loyalty

From the interviews, it can be seen that there are also concerns regarding the negative impact of eBanking on customer loyalty.

> "We internally have different views regarding the impact of eBanking on loyalty. Although it is generally believed that eBanking's remote access nature might have a negative impact on customer loyalty, as customers are

isolated from our direct interaction or contact, our bank believes that eBanking is also linking up those customers isolated from our branch network, offering a convenient channel to facilitate our interaction." *eB1*

"There might be degradation in the customer-banker relationship as a result of eBanking. Customers are making use of the Internet for transactional benefits. The Internet makes the market transparent and customers easily shift. We have to be the best all the time in order to keep them." *eB3*

"Traditionally, customers used to evaluate their banks based on relationships with branch managers, financial advisors, even tellers. But they are now evaluating the banking service based on the price and special offers. With the rise of eBanking is a possibility that the banker-customer relationship will diminish or even disappear." *eB3*

"Banks cannot easily create or maintain close ties with their customers electronically. Even though the electronic channel is very convenient for the customer, the bank-customer relationship must be weaker than that based on human, personal interaction with banking staff. What we are now doing is to develop a virtual environment that is user-friendly and to allow customers to get involved in the transaction process; that is, to create an enjoyable navigating experience and to allow them to complete the transactions or enquiries easily, quickly and accurately. All these factors will be important to create a good virtual relationship with customers." *eB4*

"The argument is that online banking is very functional, so banks must do more to maximise the online relationship." *eB4*

Threats to Loyalty in the eBanking Context

eBanking carries a number of attributes that are new to traditional retail banking. These attributes can be a threat to customers' loyalty to the principal banks. The following section summarises the threats to loyalty in the eBanking context as

discussed in the interviews with eBankers.

Commoditisation of services. One of the major threats to loyalty in eBanking is the commoditisation of services, which implies that there is no personal interaction as customers self-serve themselves by depending on information and functions made available to them via the eBanking platform.

> "For information-driven activities such as foreign exchange, brokerage, equities and funds, the Internet is a disruptive force by commoditising these entities. Automation, user-friendly self-service, easy and free access to information, instant transaction and confirmation – all these eBanking attributes commoditise these banking activities. As a consequence, in order to retain customers, we must offer instant and rich information, have "zero-delay", be interactive and price-competitive. It is not easy to build relationships by selling commodities. Customers will only depend on us for our unique services or offerings. It is not easy to keep customers." *eB3*

> "Advice-driven activities are not seriously affected at the moment. But there are possibilities that these activities will be commoditised once customers become more knowledgeable, as more advanced applications and interface are developed." *eB3*

Competition from non-banking service providers. The Internet is a platform for direct competition, not limited to existing players, but also opens to other players. It attracts non-banking service providers to get involved in the financial services business.

> "In this distant communication process, the access providers, such as telecom companies and software companies, who control the channels of communication, might interpose themselves between the customer and the bank. Such providers will not necessarily act as banks themselves. However, through their own websites or via online services, they will offer the means for customers to browse a range of banking and financial

> services and to pick and choose which products they wish to buy. The banks may then be reduced to providers of commodities, the high value-added and advice-driven activity being conducted elsewhere." *eB2*

Liquidity risk and loyalty. eBanking services encourage the instant management of money but also encourage the free movement of money to another bank located anywhere in the world.

> "eBanking heightens the risks inherent in conventional banking. Liquidity risk may increase if the loyalty of depositors is reduced. eBanking makes it much easier for depositors to transfer deposits with a click of a button. Such a "virtual" run is not easy to identify in advance. It creates new risk control challenges. However, it also implies an opportunity for the banks to acquire new deposits and customers from competitors." *eB1*

> "The global nature of the Internet means that banks situated abroad, or indeed virtual banks which exist only in cyberspace, may set up websites which can be accessed by customers worldwide. Such banks may use this as a means of soliciting deposits, including from customers in Hong Kong. It will also be easier for overseas banks to use the Internet to attract offshore deposits from Hong Kong residents." *eB1*

> "As eBanking becomes more popular, banks' credit risk may increase if the relationship with the customer becomes more distant and transitory. Some banks might even lower their credit standards under strong competitive pressure generated from eBanking." *eB2*

These views illustrate the situation that eBanking might be a threat to customer loyalty. It is also an opportunity for competitors, as it is an effective tool for customer acquisition. Liquidity risk is brought up by eBanking and will be a threat to banks and to the banking system.

The above sections discuss the eService encounter satisfaction-building

process and the factors contributing to building it, from the eBankers' perspective. Although eBanking is a promising platform for better services, communication and encounter satisfaction, it leads to isolation of customers and degradation of loyalty.

Customers' Needs and Acceptance of eBanking

In the interviews, another theme of discussion was the acceptance status/conditions of eBanking usage by the bank customers and reasons for their acceptance. It is important to explore and understand why an innovation becomes popular and accepted by customers in a service business context. One main reason is that the new application fits the needs of customers and solves their problems. The following example of online travel insurance illustrates how a product put in a new application fulfils the needs of customers. This perspective is also in line with the popular TAM. TAM is discussed briefly in Chapter 2.

Travel Insurance Illustrates the Wider Acceptance of eBanking

> "Travel insurance is a very good illustration of the symbiotic relationship between customer and bank. At the moment, about 16% of the bank's total travel insurance revenue derives from online transactions. Traditionally, the process needs human intervention. But after two content and function revamps of the travel insurance section of the eBanking website, plus the follow-up promotion push, something happened to the number of online transactions of travel insurance. We make it easier and quicker to buy the insurance online, so more people started using the site to book it." *eB2*

> "We believe that the success of online completion of travel insurance depends on two sides. Our side offers a user-friendly environment, such as ease of use, instant completion of transaction, instant delivery of the insurance certificate via email to the customer. On the customer side,

> customers can manage the transaction themselves step by step, in a highly interactive environment. They can also get travel protection immediately. We are also offering the service at a discount price to interest them in conducting the transaction online. It is quite a success." *eB2*

> "We realise that turning customer behaviour into revenue needs careful evaluation and modification of the process before putting it online, plus the needs, acceptance and involvement of eBanking customers. However, profit-making further requires us to achieve transaction volume. It is not that easy, but once we make it, such online automation makes money for the bank continuously and adds convenience for customers." *eB2*

The Diffusion Process of eBanking

According to user numbers and the usage rate, eBanking is gaining acceptance by customers. Certain functions, such as eTrading of shares and online bill payment, are gaining popularity. Compared with use in the past, eBanking customers are using eBanking more frequently and comprehensively, i.e. breadth. More advanced functions are used, i.e. depth. The diffusion can be considered as the gradually increasing number of eBanking users who use eBanking services. In this process, eBankers face more opportunities as well as challenges.

> "The eBanking market has been transformed quickly within the last two years from a minority market of early adopters into a mass market with a majority number of bank customers. Thus it puts pressure on banks to have their information system running efficiently and effectively all the time, in order to provide quality service with quick response time." *eB3*

> "We have to be more accessible and usable for customers. We must be easier to use, have more functions, a more powerful system to handle transactions quickly and more technical back-up for smooth operations." *eB1*

The three-stage diffusion process. As revealed by eBankers, the diffusion of eBanking can be distinguished into three stages: early adoption, functionality and customary stages.

> "The first stage could be termed the 'early adoption' phase, which lasted until 2002. In this period, the first movers could gain a strategic advantage by deploying eBanking service before their competitors. As a result of this first-mover advantage, we did indeed steal a bit of the market share from competitors who were late entrants to the game." *eB2*

> "Phase two of eBanking deployment is the 'functionality' phase, which ended in late 2006. In this period, as the number of eBanking customers increased incrementally, banks had to differentiate themselves with superior features and functions. Ease of use and convenience were previously the major drivers for trial. Incentives and functionality are the motivations for customers to continuously use eBanking. Online bill payment is one of the examples. This function attracts new users and enhances the usage frequency of those early adopters." *eB2*

> "We are now at the phase 'customary'. It is the phase used to build up eBanking usage to become customers' habitual behaviour. We have to formulate marketing strategy and service strategy in order to build up eBanking usage habits and make it become part of customers' life." *eB1*

> "To speed up the whole process, we cannot just rely on the gradual growth of eBanking to feed their online businesses and to achieve the customers' enrolment target and profit target. We are transforming our customers from using traditional channels to eBanking users. We are in a reactive position in eBanking because of its condition of remote access and control by customers. We have to put huge marketing and promotion efforts into motivating customers to accept eBanking." *eB3*

The diffusion process and velocity described above actually illustrates that the acceptance of eBanking by customers is multifaceted. From the above opinions

shared by the eBankers eB2 and eB3, it can be seen that they are actually facing the challenge of building up habitual eBanking usage behaviour for a group of capable and demanding customers. Usefulness, functionality, user-friendliness to and control by eBanking customers are important factors to build up eService dependency and eService encounter satisfaction.

The following section explains the push and pull factors of eBanking acceptance by customers.

Push Factors of eBanking Acceptance

In general, there are both push factors and pull factors for the acceptance of eBanking by customers. Push factors are marketing efforts plus the technology advancement attraction that motivates customers to accept eBanking. Pull factors are customers themselves who are becoming more technology-prone, involving, and are driven by the advantages offered by eService. They feel happy and at ease while interacting with the Internet and the associated services. It is these push and pull factors that move eBanking through the diffusion process. To illustrate the push and pull factors, online bill payment and eTrading are used as examples.

Push factors are the environment factors that motivate customers to accept the eBanking service. As the eBankers believe, there are two push factors contributing to customers' acceptance: marketing efforts by the banks and well-developed

broadband service.

Marketing effort of eBankers. For anything that is new, marketing is an inevitable step to inform and persuade the target customers. And eBankers have identified the target as:

> "We believe an 'educated and experienced' customer is our best customer." *eB3*

Here "educated" means, as explained by eB3, that the bank promotes and motivates customers to use a new service. After a trial, customers will either accept or reject the service. He believes that such an education process is important in the marketing of eBanking. Successful marketing stimulates customers to migrate to this new service.

For experienced customers, the eBankers believe that eBanking acceptance is affected by their previous experience of eService usage and their skilfulness.

> "There is a tendency that those who shop online are also more willing to bank online. It is believed that once users try eBanking, they will probably continue to use it." *eB2*

The proliferation of broadband service. Broadband proliferates across various districts in Hong Kong because of the expansion of networks by telecommunication companies in recent years. Following the development of comprehensive networks, there are aggressive customer acquisition strategies as well as intense competition between various broadband service providers. Together with aggressive pricing,

broadband service is now being made accessible and affordable for a growing share of the population. The well-developed infrastructure and the proliferation of broadband service facilitate customer use of eBanking.

> "Usage of the Internet has grown very rapidly among the customers. A large proportion of our customers have access to the Internet and many now have broadband. This has driven a demand from customers to be able to use the Internet for their banking needs." *eB4*

Online bill payment as an illustration of the push factor. Online bill payment is one of the most popular eBanking services. It consists of the payment of various kinds of bills, such as public utilities and insurance premiums. eBanking users can pay the bill directly via eBanking or set the payment date in advance for payment. The use of this function continues to grow at a rapid pace. In recent years, various banks have heavily promoted the bill payment function of eBanking. It acts as a driver for customers to accept eBanking as part of daily life. It also develops customers' habit of using it.

> "Online bill payment is a function that involves simple operation steps and low risk. Even when users make mistakes in the process, it involves a very minimal threat of functional risk and financial risk." *eB2*

> "We have to stimulate customers' initial trial of eBanking service and get them involved. Online bill payment is a good start for customers. Once consumers engage in these functions, I am sure that they will be satisfied with their eBanking experience." *eB3*

Online bill payment can help the users to acquire the basic skills of using

eBanking. Once the users get familiar with online bill payment and find eBanking useful and easy to use, they will then use other more complicated functions. Furthermore, once online payment instruction is set up, it keeps the users coming back regularly to perform the same functions. Using eBanking will then become their tendency and habitual behaviour.

The popularity of online bill payment is due to the push factor of banks offering aggressive promotional programmes, such as cash rebates and lucky draws, to encourage acceptance and use. eBankers believe that banks have a tremendous opportunity to increase satisfaction and loyalty by promoting eBanking as the major channel for bill payment. It is in the banks' best interests to transform as many people as possible to online bill payers.

> "Only 36% of our eBanking accounts used online bill payment in 2007. Banks have a significant opportunity to increase the usage rate of this function, which should contribute to habitual use of eBanking by customers." *eB3*

> "Online bill payers also represent the audience for online marketing. Their frequent visits to the eBanking site show their interest and involvement. Their behaviour provides ample opportunity to reinforce the banking relationship and market new products and services through this medium." *eB3*

Pull Factors of eBanking Acceptance: Control

Pull factors are eBanking customer related, affecting customers' experience of eBanking usage and satisfaction with eBanking. In this section, eBanking customers'

characteristics and behaviour of eBanking usage are explored. It is understood that customers now have a very strong desire to manage their accounts themselves and control the interaction process.

Control by customers. Research on human-computer interaction indicates that one of the most frequent explanations for why people find computer games so captivating is the powerful sense of control these games give the players (Lepper and Malone, 1987). Similarly, in an Internet environment, users have control over the interaction with the eService providers. The perceived control comes from both the Internet user's perception of his or her ability to successfully navigate through the Internet environment and the perception of how the Internet responds to his or her inputs (Novak et al., 2000). Internet customers are not passive; they want to get involved in and control the marketing communication and transaction process.

Novak et al. (2000) also highlight the significance of skill and control to the online experience. A consumer's skill at using the Internet influences his or her perceived control over online actions.

To explore the significance of control and relevant attributes in customer-eBanking interaction and its impact on eService encounter satisfaction, eBankers' attention was brought to this construct and its attributes for in-depth discussion during the interviews. The following section highlights the findings.

Customers are skilful and experienced. In fact, eBankers have realised that consumers nowadays are actually very skilful in using the Internet and relevant applications. They feel very comfortable in using the Internet for self-service. They also expect eService applications to be easy to use.

> "We now have customers who are so knowledgeable and skilful in using Amazon, eBay, Google and Facebook. They are so technology prone and technology confident now. They are increasingly self-sufficient in using Internet-enabled services, including eBanking." *eB1*

> "Customers expect eBanking to be a professional Internet application, and they suppose it is easy to use with standard navigation principles adopted in other popular portals. The more experienced they go online, the more skilfully they use the online services." *eB2*

eBankers believe that the likelihood that an individual uses eBanking increases with his or her Internet usage experience. They observe that eBanking users are usually experienced in using the computer and they are very involved in the Internet in their daily life. Once they get used to integrating their life with the Internet and related applications, they will have a very high tendency to use eBanking for both communication and transaction purposes. Also, the longer they use eBanking, the higher the degree of their dependency on eBanking.

This acceptance condition is actually in line with the Technology Acceptance Model with constructs of perceived usefulness, perceived ease of use and system usage. In addition to these constructs, eBankers highlight the factors of skilfulness

and dependency.

Customers are goal-oriented and functional-oriented. Customers using eService, including eBanking, are goal-oriented and functional-oriented. The following quotations from eBankers support such a view.

> "A growing segment of eBanking users expect businesses to offer more service options for their own control and self-service. Thus customers expect and accept that banks offer more self-service options via eBanking. As a consequence, they become more and more dependent on eBanking to achieve their financial goals." *eB2*

> "Users perceive eBanking as a serious business. Users visit the eBanking site for a purpose. Thus if the site cannot help them to achieve their goal, they will be very unhappy!" *eB1*

Customers want effective bank account management. As pointed out by eBankers, eBanking service is a useful platform, as it helps customers to manage different accounts at the same time.

> "The more financial products a customer owns, the higher the tendency for the customer to use eBanking. It shows that eBanking helps customers to manage their accounts and products effectively." *eB2*

> "Customers prefer to co-manage their accounts, such as personal deposit accounts, credit card accounts and loan accounts. Thus eBanking has become a good platform for their personal financial management." *eB2*

> "eBanking facilitates banks' transformation to become a hub of financial services offering core services, such as savings, loans, bill payment and share trading, to financial management, such as financial planning, investment and insurance. By using eBanking, the customers can manage their accounts themselves or seek the bank's help via different channels. The Internet allows for the convergence of financial services." *eB3*

Customers need comprehensive functionality. Banks offer a comprehensive set of functionalities in different categories, including account management, bills and payment, loans, credit cards, portfolio management, trading, market news, insurance, personalisation and alert messages.

> "The functionality of eBanking includes the banking tasks to be completed and their comprehensiveness, clear transaction steps, user-friendliness, ease of completion, verification of transactions and offering of online help." *eB1*

> "Thus we work hard to provide as much functionality as possible to enable users to control the process, to complete their transactions or to find all the information they require in order to get them satisfied and happy." *eB2*

As highlighted by eBanker eB2, eBanking must offer comprehensive functions to enable customers' self-service and control, and to facilitate their completion of banking tasks in order to satisfy them.

However, there remain certain operations and technical constraints for eBanking's complete functionality. For example, in order to process the application for an increase in credit limit, banks have to review the credit status of the applicant. Thus personal documents such as income statements are required for the approval, and this process cannot be completed merely via eBanking. For other applications, personal information and signature are also required. Under this condition, the complete functionality of eBanking is limited. eBankers also agree that customers still need multiple channels.

> "Despite the growing adoption of eBanking, customers are still using multiple channels to conduct their banking activities…Most of the eBanking users also use other channels at the same time. Thus it shows that branch banking and phone banking are still necessary for customers to manage their daily financial activities." *eB1*

Customers Want Control

Following the above characteristics of eBanking customers, it can be generalised that customers using eBanking look for control and self-management in the interaction process.

> "In the past, consumers were typically passive participants. Nowadays, consumers are looking for ways to take control and manage by themselves. They become more active and involved." *eB1*

> "In fact, traditional brokers still retain an advantage over eBanking. For trading on the Internet, eTraders still face a little delay because their orders have to be routed through a server and into the main computer of the exchange, which is not as direct as it is to place an order through one of the exchange terminals installed at a brokerage. But I believe that customers do not mind such a slight delay, as they prefer better control and more flexibility over their investment. Both eBanking customers and the banks have mutual benefits." *eB4*

For the current research, control is an important construct in the customer-eBanking interaction, as it illustrates that customers nowadays are capable of controlling the customer-eBanking interaction process with their skills to achieve their goals and tasks under the support of the eBanking system.

Interactivity: Enhancement of eBanking Experience

Another pull factor affecting customers' experience during the customer-eBanking interaction is interactivity. It is an important concept in Internet communication.

eBankers believe that information is a source of competitive advantage of banks and eBanking. Information is also the enabler of effective interaction between service providers and customers in an eBanking context. Interactivity is a quality of interaction. In this section, the attributes of interactivity are identified and discussed.

Understanding Interactivity

eBankers understand well the importance of interactivity in the customer communication process, especially in the Internet context.

> "I believe that interactivity is a core condition for maintaining customer experience. From the hardware side, we need to have high-speed connection, a high speed of information delivery and a high speed of service delivery. From the software side, we need to be responsive to customers' requests and banking needs." *eB2*

> "Offer instant and clear feedback on any action. That is interaction. In the Internet context, interactivity maintains a sense of closeness, as our customers are far away from us. It also tells them that we are working on their request. It also gives a sense of control and security to users." *eB1*

> "We realised that interactive features such as loan and mortgage calculators are useful and attractive to users. Users can input their own details and see how the products on offer fit with their personal conditions. Once the offer fits the users, there is a high possibility that they will accept our offer online. If such a situation continues they will develop preference towards eBanking service, and become dependent on online information

and service offerings." *eB3*

> "It has been the trend for Hong Kong stock investors to trade stock via the Internet. This trend illustrates investors' strong desire for speed and convenience for stock trading, especially when the investors aim for short-term speculation. There is increasing customer preference toward eTrading." *eB2*

From this perspective, the interactivity of eService is an important factor affecting the experience of eBanking users. The above quotations briefly explain interactivity and identify certain attributes of interactivity: high speed, instant feedback, responsiveness and a sense of closeness.

Drivers for Interactivity: Information Exchange and Service Delivery

Information accumulation is a driver to motivate customers to access eBanking sites. Interactivity makes information exchange more effective and facilitates customers' knowledge acquisition, decision making and transaction execution.

In general, there are three major types of information available to customers via eBanking: bank account information, transaction information, and financial and market information.

> "Offering the latest information can keep the customer visiting your eBanking site frequently and constantly. It gives customers a favourable experience because the information is new and quick. We even charge users for information, such as share price. Such information must be delivered in an interactive format." *eB4*

> "The latest and accurate information, such as stock quotes and PE ratio, or

> exchange rate, play a significant role to attract customers…thus quick response must be the quality of eBanking." *eB2*

The above description illustrates that information drives interactivity. At the same time, to enable interactivity, eBankers have to gather information from customers via eBanking.

> "At its core, banking activities involve the collection, storage, transfer and processing of information. Turning information into our asset becomes our job in this eService Age. The Internet is an extremely efficient device for banks to collect and manage customer activity information. Such an asset helps us to satisfy the various financial needs of individuals and businesses, in particular by integrating services or 'bundling' them together." *eB1*

> "This is actually about the work of data mining. Not only can the transaction records reflect eBanking customers' behaviour, but their potential interests are indicated by the frequently visited pages. All these factors can be taken into account to improve our services… It creates customer satisfaction and loyalty in the long term. From customers' point of view, they will get what they need in a more precise and timely manner, as we know their preferences and needs." *eB2*

> "Use data mining to find the hidden behaviour patterns from customers. Based on these behaviour patterns, we can personalise eBanking services, increase cross-selling and improve the customer relationship." *eB1*

From the above quotations, it is clear that both parties, the eBanker and the customers, are in an interactive relation to exchange information and service delivery. To maintain a high degree of interactivity with customers, eBankers have identified certain conditions to be fulfilled, namely, quick response, personalisation and rich information.

The following section discusses the conditions for interactivity from eBankers' perspectives.

Customers Want Quick Response

As pointed out by eBankers, short response time is now the minimum requirement of eBanking. They believe that the quicker the feedback from the bank, the quicker the customers get the information or confirmation they need, and then they can make the decision more quickly. As a consequence, the customer will be satisfied and happy in the process. Such quick interaction means a high degree of interactivity.

> "Customers, especially the young segment, value mobility and real-time control of their finances." *eB1*

> "Customers doing transactions online are task driven. Any delay or slowdown to complete the online task means that we could be jeopardizing the online relationships." *eB1*

> "Immediate access to banking service and speedy service are the main advantages for using eBanking. eBanking should allow users quick access to their accounts, quick access to information, and easy navigation. Application forms should be pre-filled by the system or should be as short as possible. Once customers submit the request or input the command, the eBanking system should respond immediately to fulfil the request or command." *eB2*

> "Our back office system fully supports eBanking communication and transactions. When the customers submit a request for services, no matter whether it is share trading or loan application, the system will process the request immediately. Finally, the system will deliver the services to the customer once approval is granted. There will be a high tendency for customers to accept our offer and terms if the response time is short." *eB2*

> "Fast response to client requests is the key to high rate of completed sales processes, such as insurance, personal loan and currency exchange." *eB2*

> "Consumers are actively seeking services that will make their financial lives more efficient. Some of them are willing to pay a fee for the ability to manage their funds and conduct transactions in real time." *eB3*

In fact, to realise quick response, banks have to maintain a comprehensive and current customer profile. The customer profile facilitates the application, transaction and approval process to be completed in a short time.

Customers Expect Personalisation

Personalised messages or offerings develop a favourable communication experience for customers. eBankers point out that personalisation leads to more positive responses from customers. They claim that a personalised communication message sent out to customers receives more feedback than standardised communication messages. They believe that customers prefer a more intimate and interactive format of communication which is directly addressed to them with personalised information and offerings. Thus it is logical to believe that personalised communication indicates interactivity in an eService context.

> "Service customisation is realised by centralising information the banks hold about each individual customer, together with our database management technique, thus enabling us to communicate to customers in a targeted and appropriate way." *eB1*

> "When a customer logs on as an eBanking customer, the profile that he or she chooses to log on with is linked to the customer database. That will

pull up information about the customer – name and address, for example. If he or she wants to apply for a credit card online, we can pre-fill the application form with what we know about the customer from our various linked databases. Customers welcome this facility, as they do not need to fill in too much information. They also feel that we know who they are and know them well. It also makes the application process quick and efficient, as we can process their electronic application immediately. The customer-eBanking interaction is quick and personalised. I think it is a kind of interactivity. However, they still need to send us, via post, fax, email or branch, identity documents and other relevant income documents. In the long run, we intend to eliminate the paper chain completely." *eB2*

"We enhance customers' experiences by executing more personalised offers through eBanking. For example, based on the individual customer's personal profile, credit history and transaction history, we will tailor-make pre-approved loans to each individual eBanking customer with personalised loan size and interest rate. Without any paperwork, customers simply need to click a few buttons to confirm their acceptance of the offer, and then the loan will be deposited into their account within a few hours. Other personalised offers include a special deposit rate for time deposits and specialised insurance premiums. What we aim to do is to deliver a more intimate experience to the customers and let them feel a more personal touch of service even via a remote channel." *eB2*

"A more personalised approach of service can be offered, such as loan or mortgage offer with personalised interest rate, credit card services with personalised payment arrangement, immediate feedback on online enquiries and requests, and personalised financial information." *eB3*

eBankers use the terms personalisation and customisation simultaneously by referring to the tailoring of eBanking services to customers. The above quotations illustrate personalisation/customisation as an effective approach to enhance experience of interaction. It is also an important attribute of interactivity, as it stimulates the interactivity between customers and the eService provider.

Customers Look for Rich Information

As mentioned in an earlier section, information exchange is the driver of interactivity. Customers visit an eBanking website for information, whereas eBankers gather customer information via the eBanking platform. Such information exchange can also be considered as interactivity. Thus it is important to examine the significance of information in the interactivity process.

> "Consumers now conduct research online before buying. Naturally, those products which are believed to have the largest financial impact are the most heavily researched. This squeezes margins of standard banking products because it is easy for consumers to identify the apparently cheapest offer." *eB4*

It is believed that information from both the eBanking site and other financial and investment sites is empowering the customers to manage their banking matters. By using the search engines and recommender systems, customers access information which facilitates their choices and decisions on bank service selection and use.

> "Customers expect information from the Internet or from the eBanking platform to be very current and accurate." *eB1*

> "It is also our duty to offer customers the latest market information for their investment or banking decisions. Customers are more interested in market analysis rather than in purely factual information." *eB3*

> "Our eBanking website is a reliable source of information for our customers. We keep on enriching the content of our site in order to enhance the frequency of their visits. Good and rich content also helps us

> to establish a more authoritative status in the banking industry in Hong Kong." *eB2*
>
> "Share prices and investment reports are the most popular types of information being accessed, even if customers have to pay for them under certain circumstances." *eB2*

As revealed by the eBankers, they have to offer rich information to attract customers back. Thus information richness should be an attribute of interactivity, as it keeps customers' visiting behaviour. eBankers also know clearly that they must be reactive and responsive to satisfy customers' request and information needs.

Interactivity and Customer Satisfaction

Regarding the impact of interactivity on customer satisfaction, eBankers really believe that interactivity must have a positive impact on customer satisfaction. They all claim that eBanking service is clearly an enhancement of banking service to customers. They also think that its comprehensive functions meet the expectation of most customers. It is also a very good platform to communicate with customers.

> "The eBanking platform is open all the time, and its access rate and usage rate are improving. By offering eBanking service, we want to be more accessible and open, in order to maintain a responsive and responsible corporate image. In the eBanking site, we display our phone number all the time, and it makes a very positive impression on all customers. We believe that it is good practice to keep all channels of communication open at all times." *eB3*

From the expert interviews, it is revealed that eBankers support the idea that interactivity is an important condition contributing to eService encounter satisfaction

and to customers' dependency during Internet interaction and transactions. For the current research, interactivity will be further tested by the quantitative method.

Involvement in eBanking Interaction

Flow comprises the total involvement of an actor with the activity (Mannell et al., 1988; Lutz and Guiry, 1994; Csikszentmihalyi, 1975). The Internet, by its nature, requires user involvement, as it is an active medium that requires the active participation of users in the communication process. When users have logged on the eBanking site, they navigate the website for information, check the account or conduct transactions. All these activities require the active involvement of users in the whole process. Cleary (1999) believes that the interactive nature of the Internet makes it a more 'involving' medium than traditional mass media. Thus it is logical to argue that during the process of eBanking interaction activity, customers' involvement is an important condition for achieving eService dependency and eService encounter satisfaction.

When the concept of involvement was brought up for discussion, eBankers highlighted the active participation of eBanking customers in the banking process. They generally believe that the greater the participation of customers in the customer-eBanking interaction, the more involved they are. eBankers also pay attention to the customers' navigation experience during the interaction. They think

that positive navigation experience should be indicated by whether they enjoy the customer-eBanking interaction process or not.

Active Participation in the eBanking Process

In an eBanking process, customers participate actively. They take up the responsibility of banking by themselves and do not depend on others, such as bank officers or tellers. It also means they are responsible for the management of their own accounts.

> "eBanking offers convergence of financial services for the customer. We believe that customers will actively participate in the banking process to manage their own accounts. Such participation in the banking process implies that customers are now responsible for and manage the eBanking process. And in this management process, they will probably become more involved and achieve satisfaction." *eB3*

> "eBanking is not so much a new product, really, just an evolution of customer communications which are increasingly two-way. In terms of eBanking, more banks will provide simple tools for users to track and manage their personal finances. By making use of eBanking as an interaction platform, we are developing more social-media-inspired services such as user forums and blogs to facilitate bank-to-customer and customer-to-customer communication. This might stimulate the active participation of customers. This should also be a kind of involvement." *eB2*

Navigation

The concept of navigation was brought up during the discussion. There is a lot of discussion on navigation from the technical point of view with eBankers, especially in the area of website design. However, this concept is not well studied in

the research related to the online behaviour of users.

As discussed, from the technical point of view, navigation is one of the most critical aspects of website development. A navigation scheme represents the table of contents of a website, and it is the path for information acquisition and goal accomplishment. A website's navigation scheme and features should allow users to find and access information and achieve goals effectively and efficiently.

From the behavioural perspective, most users are goal-directed. They are all committed and involved in the interaction process with the aim to achieve their goals with minimal effort and maximum efficiency. Thus the website should be easy and free to navigate and be manageable by users with minimal requirements of web skill and eBanking skill.

eBankers stated that navigation can be described as a series of actions including the user clicking on the icon or typing an address into the web browser's address bar, waiting until something appears on the computer screen, and then starting to browse through a specific website. The user will then continue to click on the hyperlinks and navigate to where he or she wants to go. It is thus very important to let users have perceived smoothness and easiness of clicking and navigating. In the navigation process, each successive click should move users to the direction of goal achievement and consequently obtain satisfaction for successful navigation.

> "While designing the eBanking website, our objective is easy to navigate." *eB2*

> "The navigation menu is heavily relied on to provide customers with the initial overview of the site and its offerings." *eB3*

> "Customers look for user-friendliness, easy navigation, speed and security from an eBanking service." *eB1*

Enjoyment

Another attribute brought up by eBankers during the discussion of involvement is enjoyment. eBankers believe that the Internet is now not only a tool, but it is also a toy for playing and for fun. This concept is not limited to the youth segment or the Net Generation but also to Generations X and Y. Thus, eBankers share their reactions to this situation:

> "The key opportunity in the future will be for financial services institutions to really understand and predict customer behaviour through the different channels and allow the customers to have an enjoyable financial services experience across different channels." *eB3*

> "Enjoyment can be described in two aspects: customers have fun in the process and the atmosphere, such as they find out something interesting or useful, have fun in the process of navigating, and feel happy in the well-designed and interactive eBanking environment. Another aspect is that they are happy with the outcome by using eBanking. More important, the outcome can only be achieved by using eBanking." *eB2*

> "For enjoyment, we must ensure that customers can use the eBanking service in a relaxed and safe manner!"*eB4*

To conclude, involvement can be conceptualised as the active participation of customers in the customer-eBanking interaction process. In such a process, customers navigate freely on the website and achieve a high degree of enjoyment. Participation, navigation and enjoyment are then identified as the attributes of eService involvement.

eTrading as an Illustration of Interactivity, Control and Involvement

Several eBanking applications can be used to illustrate and highlight relevant customer-eBanking interaction constructs for further study. Online bill payment and travel insurance have been discussed. eTrading is a good example to show the importance of interactivity, control and involvement of customers in the customer-eBanking interaction process and the impact on eService encounter satisfaction.

Brief Background of eTrading

eTrading (online stock trading) has increased substantially since mid-2005. Hong Kong stock investors were very cautious before 2004, as they experienced the 1997 Asian financial crisis, the 9/11 terrorist attacks in 2001 and SARS in 2003. Starting in 2004, the number of stock investors started to increase. Banks in Hong Kong launched the online stock trading service in eBanking in 2002. In line with the improving stock market performance since 2004 and Hong Kong's status as the

major initial public offering location of various Chinese enterprises starting in 2006, the demand for online trading of stock is increasing incrementally. It is estimated that stock trading via the Internet will be the trend, and user preferential factors play the determining role.

Interactivity in eTrading

eBankers believe that control and interactivity are the factors attracting customers' usage and satisfaction.

> "By using the online information in the screen, using the keyboard to key in the numbers, i.e. share quote and price, then the investor/customer can do the transactions. In this process, the investor controls the process, initiates the transaction and completes the transaction. In the transaction process, the investor makes the decision and conducts the transaction by using instant information. This transaction process must be very interactive without any delays. Once the investors use this service in eBanking, they realise that it is good enough for their speculation and investment." *eB2*

> "It targets a specific segment of investors who will access eBanking frequently and conduct transactions frequently. What we are offering are real-time stock trading information and transaction services at a relatively low charge." *eB4*

Control and Involvement in eTrading

> "At the moment, 80% of share trading, including selling and buying, conducted through the bank by retail customers, is done online. The trigger for such a high percentage and strong growth is that investors can have greater control over and be highly involved in their investment decisions, and manage the whole process by themselves." *eB1*

> "Though eTrading helps reduce brokerage costs, it is believed that this is not the main reason for its growth…eTrading's low pricing is surely a factor, but easy to use, rich information and value-added service are far

more important. Via eBanking, customers are enabled to access a consolidated picture of all their holdings, and this allows them to go online at any time to see what the net value of all of their investments is." *eB2*

"Customers have now become more self-directed and more knowledgeable about financial investment and the Internet. Thus they tend to prefer using the channel which gives them greater control. They can monitor the market with deep concentration, and when they place an order they can watch its progress throughout the day. It is an involving process requiring their active participation. They can also manage and monitor their investment portfolios in an easier manner." *eB3*

"To be more competitive, our eBanking's latest trading platform provides access for Hong Kong customers to stock trading in six global exchanges covering 30,000 stocks. Such eTrading service also includes free access to all the research done by our Asia research team. The online trading portals of the major local banks do not include free access for retail customers to research reports, but we are doing so now. We believe that enhancements of this kind will be very likely to encourage eBanking customers to use our platform for stock trading or for other financial investment services." *eB3*

Conclusion

In this section, the expert interviews conducted with eBankers are reported. Various aspects related to customer-eBanking interaction, including the customer behaviour of interacting with the eBanking system and the relationship outcome, are discussed. eBankers support the idea that in the process of customer-eBanking interaction, interactivity, control and involvement are the constructs that affect customer dependency and eService encounter satisfaction. Customer satisfaction is considered an important relationship outcome of eBanking interaction. eBankers also support the idea that the eBanking encounter satisfaction contributes to the overall

satisfaction and loyalty of the service provider, i.e. the principal bank. eBankers also highlight the importance of customer dependency on eBanking for eService encounter satisfaction and overall satisfaction.

In the context of the Internet and, more specifically, in the context of eBanking, it is observed that customers' determination in the customer-eBanking interaction is becoming obvious. Such a situation can be well illustrated by customer-eBanking interaction constructs: interactivity, control and involvement.

In the following section, customers' views on customer-eBanking interaction are explored. As mentioned by one of the eBankers:

> "Traditionally, banks focus on channel and service development while consumers focus on needs, benefits and solutions, and think of brands, information, daily interactions and transactions." *eB1*

Thus it is worthwhile and necessary to look at customer-eBanking interaction from customers' perspective.

Focus Group Study

After the expert interviews with eBankers, a number of customer-eBanking interaction constructs were identified. Following the findings from the expert interviews, focus group studies with eBanking customers were conducted to further define these constructs and the associated attributes.

The Organisation of Focus Groups

There are four major themes to be studied. Each theme had two focus groups. There were totally eight focus groups conducted. Table 5.3 summarises the themes and focuses.

Table 5.3 Focus Group Study: Theme, Focus and Number of Participants

Groups	**Theme**	**Focus**	**Number of Participants**
G1 & G2	Interactivity	Interactivity is the basic condition in all service encounters and communication. These focus groups discussed the concept of Internet interactivity, the associated attributes and their significance to the relationship outcome of dependency, satisfaction and loyalty in the eBanking context.	G1 = 10 G2 = 10

G3 & G4	Control	Control is a construct frequently mentioned in the expert interviews. Customers' control in the customer-eBanking interaction process depends on both system factors and user factors. According to the Technology Acceptance Model, the acceptance of eBanking depends on the users' subjective perception of the system's usefulness and ease of use. These focus groups discuss the attributes related to technology acceptance and control.	G3 = 11 G4 = 10
G5 & G6	Involvement	eBanking is an activity that is goal-oriented with a high degree of personal relevance in both cognitive and behavioural aspects. These focus groups discuss customers' involvement in customer-eBanking interaction from both the cognitive and behavioural aspects.	G5 = 11 G6 = 10
G7 & G8	Dependency and eService encounter satisfaction with eBanking; Satisfaction & loyalty to principal bank	The relationship outcome of customer-eBanking interaction is explored in these focus groups. In addition to eService encounter satisfaction, satisfaction with and loyalty to the principal bank, dependency is highlighted by eBankers as an important relationship outcome. It reflects the influence of eBanking on customers. Thus it is also discussed here.	G7 = 11 G8 = 9
		Total number of participants	82

The Organisation of Data

The organisation of data can be illustrated by Figure 5.1

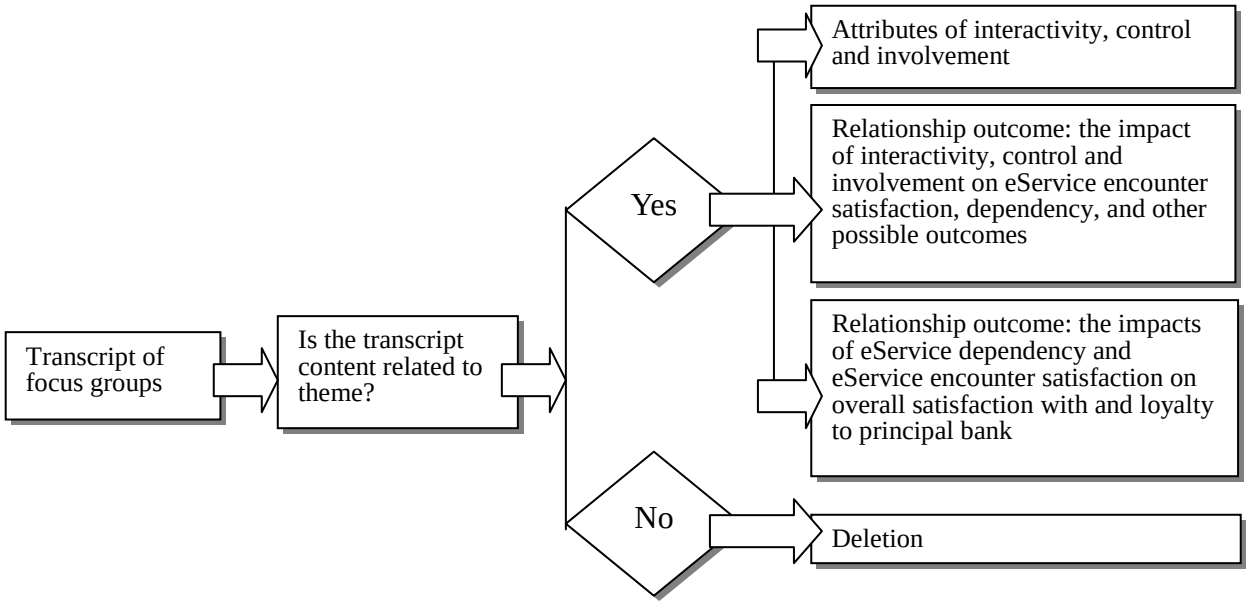


Figure 5.1 Organisation of Data from Focus Groups

Findings

The following sections describe and explain the findings from the focus group studies. The general information related to demographic characteristics, banking usage situation and reasons for participants' usage of eBanking of the participants are covered first. Then their discussions and views on interactivity, control and involvement are then presented accordingly.

Demographic Characteristics of Participants in Brief

There were 82 participants, 49 males (60%) and 33 females (40%). The age range was between 22 and 48. By looking at the nature of their jobs, we can see that

48% of the participants are managers or administrators, 47% are professionals and associate professionals and the minority (5%) are service workers.

Table 5.4 Job Nature of Participants in Focus Groups

Job Nature of Participants	No. of Participants	% of Total Participants
Managers and administrators	39	48%
Professionals	23	28%
Associate professionals	16	19%
Clerks	0	0
Service workers	4	5%
Craft and related workers	0	0
Plant and machine operators and assemblers	0	0
Elementary occupations	0	0
Skilled agricultural and fishery workers; occupations not classifiable	0	0
Total	**82**	**100%**

Banking Service Usage Behaviour: A General Description

In general, bank customers can be classified into seven segments according to their banking service option(s) adopted. Table 5.5 lists the segments with different service adoption patterns.

Table 5.5 Banking Service Adoption

	Service Options Adopted			
Types of Adopters/Customers	Encounter via Branch Outlet (branch banking)	Encounter via Phone (phone banking)	Encounter via Internet (eBanking)	Number of Participants
Integrative (Segment 1)	✓	✓	✓	27 (33%)
Conventional (Segment 2)	✓	✓		0
Trendy (Segment 3)	✓		✓	36 (44%)
Conservative (Segment 4)	✓			0
Remote commander (Segment 5)		✓	✓	16 (19%)
Voice commander (Segment 6)		✓		0
Cocooned (Segment 7)			✓	3 (4%)
			Total	82 (100%)

As all the participants in the focus groups are eBanking customers, there are no participants belonging to “conventional”, “conservative” and “voice commander”.

In the samples, the “trendy” segment accounts for the highest percentage of all the segments: 44% of bank customers. They use branch banking (bBanking) and eBanking at the same time. It is not difficult to understand, as there are certain services which require face-to-face encounters between the banking officer and the customers. Even though this segment prefers eBanking, they have to use bBanking to a certain extent. It is interesting to know that there is a limited number of customers who are “cocooned”. They use eBanking as the only service option.

Reasons for Using eBanking Services

The reasons shared by the majority for using eBanking services are:

- Convenience: easy access to banking service, such as payment and loan facilities
- Return: obtain better interest payment, more incentives and lower service fee
- Status: achieve status and equality with peer groups
- Search: search for useful information or search for incentives offered by banks
- Access to information: access variety of information, such as account information or research reports on investment and wealth management
- Enjoyment: enjoy the navigation process and searching process

Interactivity as the Major Characteristic of Customer-eBanking Interaction

The Internet is a massive global network of distributed but interconnected computer networks with associated hardware and software. It enables consumers and companies to interactively communicate and interactively access hypermedia content (Hoffman & Novak, 1996). In line with the literature, eBankers also advocate that interactivity is an important construct leading customers to use eBanking and satisfaction. To further explore the concept, interactivity is the theme of G1 and G2 focus group discussion.

The theme of G1 and G2 is the interactivity within customer-eBanking

interaction. The major questions discussed in the focus group are:

- How does perceived interactivity affect customers' eService dependency and eService encounter satisfaction?
- What are the attributes of perceived interactivity?

Major Findings from the "Interactivity" Focus Group

Regarding the interactivity nature of the Internet, participants believe that it is the result of advancements in telecommunication technology. They agree that communication and interaction are made easier and more effective by using the Internet. It is easier and more effective in the sense that the Internet helps them to get instant access to their account easily, obtain information and make transactions remotely.

During the discussion, eight attributes of interactivity were identified. Some of them are mentioned and discussed in the eBanker expert interviews, but some of them are newly raised by the focus group participants. Some overlap because of the closeness in meaning. The attributes are:

- Two-way communication
- Speed
- Responsiveness
- Synchronicity

- Access to real-time information
- Provision of useful information
- Personalisation
- Customisation

The following section discusses these attributes of interactivity with reference to the participants' views and opinions.

Two-way Communication

"Two-way communication" is mentioned in the discussion, as participants believe that responses and feedback are important in the process of interaction. In fact, some participants prefer branch banking (bBanking) service because two-way communication occurs between them and banking officers. Such interaction is more personal and direct.

However, some of the participants believe that the Internet also offers two-way communication between the bank and the customers. Its high speed and convenience fit the lifestyle of Hong Kong customers, although it is not as personal as face-to-face interaction.

> "Interactivity represents two-way communication." *G1P3*

> "Interaction is the give and take action, and involves the exchange of ideas." *G1P5*

> "In a service process, it is the interaction between the service personnel and the customers. In eBanking, we interact with the Internet and computer system. The system generates predetermined feedback and action." *G1P9*

> "Responses and feedback are important in an interactive communication. Interactive implies a two-way and influential activity." *G2P2*

> "Interactivity is a continuous interacting process between the bank and the customers." *G2P3*

Two-way communication might be initiated by the service provider, such as marketing communication messages or exclusive information in the form of newsletters or reports. Interactions initiated by customers are in the form of request for service on account management, information seeking, suggestions and complaints.

It is believed that eBanking provides an excellent platform to build a two-way customer-eBanking relationship between service providers and customers, and to offer favourable opportunities for favourable responses.

Some participants believe that the email function in eBanking is a more effective option for seeking assistance or making complaints than other communication options:

> "Emailing about my problems is probably a better way to seek assistance, due to quicker response times and ease. I don't need to queue up or wait for a long time." *G2P6*

> "I prefer to receive email or spam, but not cold calls. I can read or delete the email myself. Sometimes I obtain useful information and services from

email. Cold calls always come at an inappropriate time. They also waste my time." *G2P9*

The acceptance of email instead of cold calls is probably because email direct marketing is conducted with consumer "permission". And even if customers do not want it, it is less intrusive and easy to delete.

Action and Reaction of Interactivity: Speed, Responsiveness and Synchronicity

Another concern regarding interactivity is related to the relationship between the actions and reactions within the interaction. With reference to the literature, there is different terminology to describe such relations. Steuer (1992) highlights the concept of speed during interactivity. In Haeckel's (1998) words, it is synchronicity that represents the discrepancy between the stimulation and consequent responses. From a service quality perspective, Zeithaml and Bitner (1996) use responsiveness to reflect the offering of services in a prompt and speedy manner.

Speed

In line with Steuer (1992), participants believe that "speed" is an important attribute of interactivity.

From a temporal aspect to look at Internet communication, speed is an attribute of interactivity. Some participants focus on speed to describe the time gap between response, such as fast download speed, speedy transaction and short reaction time to request.

> "With reliable, secure and fast-loading speed, it is an interactive way to get information and obtain services." *G1P8*

> "Speed is very important to give feedback to enquiries by service providers. It reflects and affects interactivity." *G2P5*

> "When I do input, it will give me feedback within seconds." *G2P6*

Responsiveness

From a service quality perspective, Zeithaml & Bitner (1996) define responsiveness as the willingness to help customers and provide prompt service. Some respondents focus on the responsiveness of the eBanking service.

> "To offer good service, the bank should not keep the customer waiting, and it has to be responsive. This principle should also be applied to eBanking." *G1P1*

> "The shorter the response time in an Internet communication, the higher the degree of interactivity." *G1P3*

> "In an Internet environment, the smoothness of the interaction depends on the hardware capacity, software design and capability, and responsiveness of the service personnel." *G2P3*

> "The more responsive the interaction, the more it is interactive." *G2P8*

> "Response time is an indication of responsiveness, such as the time to get the information, the time for the transaction to be completed. Interactivity represents instant information delivery, instant transaction, instant confirmation and instant response." *G2P9*

> "Interactivity is the efficiency of the services provided by a channel. eBanking should be very responsive to our commands and requests." *G2P10*

Synchronicity

A similar concept to "speed" and "responsiveness" is "synchronicity". From a communication perspective, Haeckel (1998) identifies the condition of synchronicity to represent the stimulation and consequent responses.

In the customer-eBanking interaction process, immediate responses from the bank are expected from the customers. The responsive reaction includes the provision of accurate information and advice, quick transactions, quick confirmation, instant response with short waiting times, in order to provide prompt service and help customers resolve problems.

> "The best standard is zero waiting time, and then there will be a high degree of synchronicity between customers' action and the eBank's reaction. Sometimes it is critical when the financial market is fluctuating. The synchronous action and reactions means a lot!" *G1P7*

> "I can access my eBanking account within a minute and with a few clicks. Of course, the speed of connection depends on the ISP and my computer. But it also depends on the website and my feeling, my urgency and the timing." *G1P9*

> "Immediacy of the feedback." *G2P1*

> "The more instantaneous a user perceives his or her actions or reactions in the Internet context, the higher he or she perceives interactivity." *G2P2*

Although various terminologies are used to describe the immediacy of interaction between eBanking and the customers, the term "responsiveness" is considered as appropriate for the current research. It is believed that it incorporates

the concepts of speed and synchronicity in the Internet interaction, in addition to its service orientation.

Information Richness

For interactivity to be perceived, to fit the other associated attributes of interactivity, and to fulfil the information need of customers, information in the eBanking platform should be current, reliable and sufficient. Participants share their views regarding their expectations of information from eBanking:

> "Rich information is another condition for successful eBanking." *G1P3*

> "I think interactivity depends on its accessibility to information and functions. Hyperlinks help us access information. The more hyperlinks, the more interactive. The more functions, the more interactive. The more icons, the more interactive." *G1P7*

> "Interaction is the process in which the interactants exchange ideas and information. For eBanking, I expect I can obtain the latest and most reliable information and news from the eBanking website. These ideas, information or news should be useful for my banking decisions." *G2P2*

> "I expect the Internet provides accurate, current and reliable banking information." *G2P3*

> "It enables the service providers and the customers to have real-time information and a two-way exchange of information." *G2P5*

> "By using eBanking, more people can have immediate access to more banking and money management information than ever before." *G2P6*

In eBanking, interactivity should represent the availability of various service features and options, and the availability and accessibility of a variety of information. A core value of the Internet as well as eBanking is that it is accessible to rich information. Based on these views, an eBanking site has a high level of interactivity if it provides sufficient, current and reliable information to customers as a synchronous reaction to their customers' requests.

Addressability to Individual Customers: Customisation vs. Personalisation

Most participants agreed that the Internet is a medium with a high degree of addressability to individuals. After registering for the eBanking service, participants receive customised invitations and offers, such as special rates on fixed time deposit, sent to their email inbox in their eBanking account. However, some participants think that the Internet is an impersonal medium. They raised the concern that they receive a lot of spam from the bank and they did not welcome this kind of mass customisation from the bank.

Personalisation and customisation are the two concepts illustrating the addressability of the Internet. Personalisation/customisation enhances interactivity between service providers and customers, as both concepts represent that the marketing communication messages sent via the eBanking platform are addressed to specific customers individually.

The concepts were explained to participants. Roberts (2003) also offers a clear explanation – customisation is the creation of content, offers or services based on the needs and wants of an individual customer, whereas personalisation is the creation of specialised content for a prospect by choosing from an array of existing content modules.

In other words, personalisation is the management and alternation of the communication message and information initiated by the customers, i.e. customer/user controlled. Customisation is the reconfiguration, through the interface software of eBanking, of the communication message and services according to the target's profile and responses, i.e. eMarketer controlled.

Some participants personalise the website content to fit their needs or preferences in different degrees. They believe that personalisation and customisation are necessary.

> "Provision of personal services should be specified more clearly as provision of financial services, provision of financial information, and provision of professional financial consultation. eBanking should achieve that, in order to be personalised." *G2P3*

It is believed that, no matter whether from the perspective of eBankers or eBanking customers, personalisation and customisation are good, as they enhance the interactivity of customer-eBanking communication. Tailor-made communication messages are considered more welcome by eBanking customers.

Although personalisation and customisation are not well recognised by participants, they realised their importance after explanation and discussion. They also realised that personalisation and customisation are widely adopted in the communication of the eBanking platform. Thus personalisation/customisation is supported as an attribute of interactivity in the eBanker expert interviews and customers' focus groups.

In the current research, the term "personalisation" is used. It is generalised to include "customisation" by focusing on tailor-made communication messages for customers.

Interactivity: The Primary Result for Further Study

After an in-depth examination of the concept of interactivity and its attributes, a definition of interactivity is proposed here for the current research: *Interactivity is a perception of customers with eBanking interaction in the eService context. Sender-receivers are cognitively involved in a two-way, personalised communication process with a high degree of responsiveness.*

As a result, three attributes are confined and they will be further studied in the quantitative study: two-way communication, responsiveness and personalisation.

It is then argued that interactivity, with these three attributes, contributes to eService dependency and eService encounter satisfaction. The relationship between

interactivity, eService dependency and eService encounter satisfaction will be hypothesised and tested later on.

Control in the Customer-eBanking Interaction

Control is the power to command change with the aim to attain the goal. Locke (1991) explains control as customers' attempt to reduce the discrepancy between their goals and the actual situation. Ariely (2000) finds that when consumers are given a greater degree of control over information flow, they will better understand what they are examining, better match their preferences, and have more confidence in their decision. As a result of the advancement of technology and change of corporate management's mindset to customer orientation, customers now have control over when, where and how to interact with service providers and what message/information/decision to get/make. In an Internet environment, customers are free to surf the websites and initiate/continue/stop the interactions. It is an interaction process controlled by the customers.

When participants discussed the concept of "control", they said that such "self-service" and "do it yourself" become popular even in the banking service. They also stated that the Internet and the eBanking platform enable them to control the communication as well as the transaction process. They also mentioned their capability to control, their confidence to control, and the benefits and usefulness of

control. However, some participants also believe that customers' control is limited, as eBanking is still under the control of the eService provider that owns, offers and manages the eBanking service.

Different studies have different conceptualisation of control. Advertising and communication research done by Bezjian-Avery et al. (1998), Roehm and Haugtvedt (1999), Hanssen et al. (1996), McMillan (2000) and Williams et al. (1988) propose that consumer control is a dimension of interactivity.

However, based on Csikszentmihalyi's (1975) Flow Theory, control is a positive subjective experience motivating an individual to perform an activity. Baronas and Louis (1988) also confirm that a higher degree of perceived control by the customers towards information systems leads to a more positive attitude and satisfaction. Thus, it is considered that control is an independent construct, as it is the consumers' perception of their capability in the communication process. The Internet is the platform that enables consumers to have more control. eBankers believe that the emergence of eBanking empowers the customers, and they now can control the process of banking via the Internet and their skills. Thus, this is another construct to be examined in the current research.

The theme of G3 and G4 is the control within customer-eBanking interaction. The major questions discussed in the focus group are:

- How does control affect customers' eService dependency and eService encounter satisfaction?
- What are the attributes of control?

Major Findings from the "Control" Focus Group

During the discussion, four attributes of control were identified. Some are mentioned and discussed in the eBanker expert interview, but some are raised for the first time by the focus group. The attributes are:

- Perceived skilfulness
- Task completion
- Perceived ease of use
- Perceived usefulness

The following section discusses these attributes of control with reference to the participants' views and opinions.

Perceived Skilfulness

It is found that customers' perceived skilfulness is associated with their control in the eBanking usage process. Fourteen out of 21 participants claim that they are highly skilful in using eBanking; thus they can control the whole interaction and transaction process completely.

> "I have already got used to going online and accessing different websites for shopping or whatever. I have also got used to using eBanking for different banking activities." *G3P5*

> "I can depend on myself to manage my account and investment by using eBanking. I am so confident in my computer skills." *G3P6*

> "I have used eBanking for more than four years. The eBanking service is getting more comprehensive and I can manage to use it without any difficulties." *G3P11*

> "It requires users to have certain Internet skills to use eBanking, although they can be learnt by practising." *G4P2*

> "We have to be skilful in order to control and to avoid being out of control, as the banking process involves financial risk when inputting mistakes are made." *G4P4*

In the Internet environment, control is the perceived capability of navigating through the website and using the service options available.

Task Completion

In line with Hoffman & Novak's (1996) view of goal-oriented Internet usage behaviour, 15 out of 21 participants point out that their eBanking usage is goal-oriented; they aim to get some banking tasks done, such as transferring money to other accounts, exchanging currency, trading stock, applying for credit cards and purchasing travel insurance. With a goal in mind, they would like to complete the task as quickly as possible. As a consequence, they expect a high degree of responsiveness and interactivity while using eBanking.

> "Banking online has full functionality compared with retail banking. I can depend on it." *G3P1*

> "I can apply for a credit card and a loan via eBanking." *G3P2*

> "Some transactions are so important that I have to get them done myself. I can get them done via eBanking." *G3P6*

> "I need to do transactions frequently, especially share trading. eBanking is a good alternative for me as a frequent user." *G4P5*

> "I can get my banking tasks done anytime, anywhere." *G4P10*

Accumulating information is another task of eBanking users. Ten out of 21 participants mentioned that they aim to accumulate information related to investment and banking, such as interest rate check, stock price check, mortgage rate comparison and investment report. In this situation, they usually visit different eBanking websites or make use of other communication options for more information.

> "Visiting eBanking sites is a knowledge-enriching activity, as I get access to different investment reports by various fund houses." *G4P6*

> "I can access banking information and market information via the eBanking platform. eBanking should provide customers with such information for banking and investment activities." *G4P8*

Perceived Ease of Use

In the discussion, ease of use is highlighted. Participants think that the ease of use of the eBanking functions also affects their control of the eBanking process. It is an important attribute, as participants believe that all IT applications, including eBanking application, should be easy to use in order to support users solving problems with minimum effort.

In line with Davis's (1989) Technology Acceptance Model, eBanking customers believe that ease of use affects the intention to use and the actual usage of eBanking. Participants also raise the point that ease of use affects their usage frequency. They also realise that ease of use depends on various factors. Of these factors, some are related to the eBanking system and the design of the website; some factors are related to users themselves.

> "eBanking should be designed to be easy to use and to function smoothly." *G3P1*

> "The system guides me through to complete the transaction process. It is user-friendly." G3P3

> "I can access my account anywhere and anytime by computer easily, without any difficulties." *G3P6*

> "Of course, it should be easy to use or user-friendly. It is helping us to solve problems, not creating problems for us to solve! But not all eBanking websites are user-friendly; some are user-unfriendly." *G4P1*

> "I think ease of use means that we do not need to learn how to use it but we are able to use it." *G4P4*

> "Easy to access, easy to navigate and easy to get the transactions done." *G4P8*

However, some participants believe that ease of use links up with their personal experiences, such as computer skill and Internet usage experience.

> "I use the computer and Internet everyday, so using eBanking is easy for me." *G3P10*

> "As I am experienced in using the Internet, I can manage all eBanking functions." *G4P2*

> "Once you get familiar with the site, you can surf around and manage all the functions." *G4P9*

From the responses of the participants, it is obvious that ease of use and usefulness of eBanking are important factors contributing to their eBanking usage. Perceived usefulness is discussed in the following section.

Perceived Usefulness

In the Technology Acceptance Model, perceived usefulness is the salient factor determining usage behaviour. Perceived usefulness closely links with perceived ease of use. Davis (1993) notes that a system that is difficult to use is less likely to be perceived as useful. Usefulness is defined as the degree to which a person believes that using a particular system would enhance his or her job performance. Following this definition, it is logical to assume that perceived usefulness is also a dimension of control. It is useful to control the eBanking system in the interaction process, as the system facilitates the banking activities. The eBanking system is useful in controlling the interaction process in the usage of eBanking. A system should be perceived by users as useful in order to give users the perception of controlling the interaction process.

> "eBanking is getting better and better, as it offers comprehensive service and it is useful." *G3P2*
>
> "I expect the Internet to provide accurate, current and reliable banking information." *G3P3*
>
> "EBanking has full functionality compared with retail banking. It is useful to manage my accounts." *G4P8*
>
> "For standardised service, it is fine. But for a consultative kind of service, it will be a problem." *G4P9*

It can be seen that most of the participants have experience in using eBanking and found that it is useful.

Control: The Primary Result for Further Study

After an in-depth examination of the concept of control and its attributes, a definition of control is proposed here for the current research: *Control represents the determination of eBanking customers in the customer-eBanking interaction process. The eBanking customers perceive that the eBanking system is manageable with their Internet skills for the completion of certain banking tasks online.*

As a result, four attributes are confined and they will be further studied in the quantitative study: perceived skilfulness, task completion, perceived ease of use and perceived usefulness.

It is then argued that control, with these four attributes, contributes to eService dependency and eService encounter satisfaction. The relationship between

control, eService dependency and eService encounter satisfaction will be hypothesised and tested later on.

Involvement of Customers during Customer-eBanking Interaction

As the Internet is a new medium with an interactive nature, users' participatory experience, i.e. involvement in the customer-eBanking interaction process, will be an important construct to explore further. Interaction between customers and service providers actually provides a direct measurement of customers' involvement. Other dimensions of involvement are also discussed in the focus groups, such as personal relevancy, perceived importance, enjoyment and navigation.

When participants are asked about their involvement in the eBanking activities, some said they believe that they are more actively managing their bank account by logging on to their eBanking account, compared with using bBanking and pBanking. They think that the Internet and eBanking are effective tools for active management of their bank accounts. Some participants think that involvement can be measured by the frequency of accessing eBanking. Some participants also think that there are a lot of factors influencing their involvement, such as the display and design of the website or their personal interest in using eBanking.

To generalise, there are two types of involvement in the minds of customers.

The first type of involvement relates to their account management. As managing their account means the management of their money and assets, participants actively participate in bank account management and pay attention to various items in their accounts. For this type, customers take a cognitive style of involvement.

The second type is the involvement in the customer-eBanking interaction. This kind of involvement means that they like to navigate the website freely and prefer to use eBanking as the platform of interaction. In the customer-eBanking interaction, they have fun with great interest and enjoy the navigation process. For this type, customers take an affective style of involvement.

The theme of G5 and G6 is the involvement within customer-eBanking interaction. The major questions discussed in the focus group are:

- How does involvement affect customers' eService dependency and eService encounter satisfaction?
- What are the attributes of involvement?

Major Findings from the "Involvement" Focus Group

During the discussion, two attributes of involvement were identified. Some are mentioned and discussed in the eBanker expert interview, but some are raised for the first time in the focus group. The attributes are:

- Active participation

- Intrinsic interest
- Navigation

The following section discusses these attributes of involvement with reference to the participants' views and opinions.

Active Participation in Bank Account Management

According to Barki and Hartwick (1989) and Krugman (1967), consumer involvement refers to the subjective psychological state of the consumer and defines the importance and personal relevance that consumers attach to a product. Houston and Rothschild (1978) define involvement as the complexity of cognitive and behavioural processes characterising the overall consumer decision process. Levy and Windahl (1985) define involvement as the degree to which audiences perceive the connection between them and the media content. Such personal relevance leads to involvement in the customer-eBanking interaction process. In the focus groups, it is seen that participants are all very conscious of the management of bank accounts via eBanking. Such a situation reflects their consciousness of personal finance and interest in using eBanking for bank account management.

> "I have to get involved, as it is my account and my money." *G5P2*

> "I visit my bank's website at least two or three times a day for various reasons, such as balance check, bill payment, stock price check, or sometimes simply surfing for something interesting. Using eBanking has been part of my life and habit." *G5P4*

> "When I am playing online games, I am so excited and I am totally involved. But for eBanking, I will be very careful to input the command and confirm the transaction. I think it is also a kind of involvement but a bit different." *G5P6*
>
> "I have to concentrate and to act quickly as the market is changing; the price is changing every minute." *G5P11*
>
> "I log on to my eBanking account frequently to check the stock price, twice in the morning and twice in the afternoon." *G6P1*
>
> "I have to manage my money myself; thus I have managed my account myself." *G6P8*
>
> "Information searching is a kind of involvement. Looking at my account via eBanking is also a kind of involvement." *G6P10*

This type of active participation can be defined as cognitive involvement, as it comprises cognitive activities in the minds of customers. Cognitive involvement is thoroughly explored in many consumer research studies related to product purchasing. Although there is a lack of research on cognitive involvement in an eService setting, certain eBanking behaviours can reflect the cognitive involvement of customers, such as:

- Perception of personal relevance of the activities, such as risk perception associated with the activities or the personal association with the information or media content
- Frequency of interaction
- Continuity of interaction

- Synchronicity of interaction

Intrinsic Interest

It is recognised that some participants like to use the Internet simply for their interest in the Internet and its application, and the experience of enjoyment.

> "I enjoy the surfing and interactive process while using eBanking. It is an enjoyable process and interesting self-service experience." *G5P1*

> "I like to use it and I am used to using it habitually. I am happy and satisfied with using it." *G5P2*

> "I am interested in doing everything via different platforms on the Internet, such as eBanking, eTicketing and eBooking." *G5P6*

> "eBanking is part of my daily life. It is as common as using my mobile phone and shopping. It is a virtual world but can help us to solve problems in reality and get my banking tasks done." *G5P8*

> "It is good and enjoyable to use the Internet for banking." G6P4

> "I am happy and relaxed, as I can settle my bills with simple inputs and clicks." *G6P6*

> "At the very beginning, I just wanted to see if it really works. I would like to be on the leading edge of technology. But now, it is really useful for me." *G6P9*

It can be seen that customers' involvement can be indicated by their intrinsic interest in the Internet and eServices, and their enjoyment of the Interaction process.

According to Deci and Ryan (1985), intrinsic interest is based on an individual's need to be competent, self-determining and need for "internal rewards". As reflected in the above quotations related to active involvement and intrinsic

interest, it can be realised that during the customer-eBanking interaction process, customers' intrinsic interest motivates them to click on the hyperlinks, to gather information and have an appreciation of the services. All of these factors represent their active involvement.

Navigation

Hoffman and Novak (1996) define navigation as the process of self-directed movement through the website, involving nonlinear search and retrieval methods that permit greater freedom of choice. Navigation is discussed in the expert interviews with eBankers. It is recognised that eBankers put more emphasis on the technical aspect of navigation, such as the design of the navigation scheme, to ensure the smoothness of navigation. However, from the customers' perspective, most of them look for self-determination in the navigation process, free to click and move, and free to complete their banking tasks.

> "I am involved, as it is interactive. I navigate purposefully for information and for financial activities." *G5P9*

> "It is fun and easy to surf the Net, and I can obtain additional information which helps my banking decisions." *G5P11*

> "The eBanking site is well-designed for easy navigation. It is easy to follow and gets the task done." *G6P7*

Involvement: The Primary Result for Further Study

After an in-depth examination of the concept of involvement and its attributes, a definition of involvement is proposed here for the current research: *Involvement is the psychological state of the users deeply concentrating on the online navigation with a high degree of interest.*

As a result, two attributes are confined and they will be further studied in the quantitative study: intrinsic interest and navigation.

It is then argued that involvement, with these two attributes, might contribute to eService dependency and eService encounter satisfaction. The relationship between involvement, eService dependency and eService encounter satisfaction will be hypothesised and tested later on.

eService Dependency, eService Encounter Satisfaction, Overall Satisfaction and Loyalty

This section discusses the relationship outcome of customer-eBanking interaction. Interaction is an essential component in service encounters. For the current research, it is argued that in the interaction process of the eService encounter, satisfaction is the relationship outcome. Two types of customer satisfaction are examined, namely eService encounter satisfaction (i.e. the service encounter level), and overall satisfaction with the principal bank (i.e. the corporate level). Two other

relationship outcomes examined are dependency and loyalty. Dependency as a relationship outcome is identified during the eBanker expert interviews. Loyalty is a relationship outcome usually associated with customer satisfaction.

This section discusses the findings from focus groups 7 and 8 regarding the relationship outcome of customer-eBanking interaction.

eService Encounter Satisfaction

Shostack (1985) defines a service encounter as the period of time of an interaction between a customer and a service provider. Such a definition of encounter is broad, as it might include the customers' interaction with customer service employees, machines, physical facilities, waiting time, and other service-offering elements such as the Internet.

Czepiel (1990), Grönroos (2000), and Collier and Meyer (1998) found that the interaction between customers and service providers during the service encounter is important, as customers evaluate the service based on the interaction. A service encounter is composed of a service outcome – what the customer receives during the exchange – and the process of service delivery – the interaction through which the outcome is delivered to the customer. Thus, service encounter satisfaction is a combination of customer satisfaction with the service outcome and customer satisfaction with the process of service delivery.

In the eBanking context, customers engage in the eService encounter with banks by accessing their eBanking website, navigating through it, searching for product and service information, conducting a transaction or communicating with customer service representatives via the eBanking platform.

Following these thoughts on eService encounter satisfaction, participants were asked to share their views on the aspects of the service outcome of using eBanking and the process of interaction.

In general, they said that they were satisfied with the eService encounter interaction and service outcome.

> "The process is usually smooth, without any delay or big problems. However, sometimes the speed is a bit slow, but it is acceptable." *G7P2*

> "At the very beginning, I have to learn how to use it, step by step. Once I got familiar with it, I could handle it easily and I can use most of the functions that are useful for me." *G7P6*

> "The eBanking system is user-friendly and I am satisfied with it." *G7P10*

> "I am happy with the eBanking encountering experience." *G7P11*

> "Although the interaction with the system seems impersonal, it is a good experience. I input the command and the system works for me. The system also informs me what it is doing for me." *G8P1*

> "I can do the transactions by myself. I mean I can do what I expect to do. But sometimes I have to get familiar with some steps and some functions before I can do what I would like to do." *G8P3*

> "I am satisfied with the eBanking service as a whole." *G8P8*

> "Customer support is very important. Once I have problems accessing my eBanking account or have problems during the transaction, I can ask for help immediately, either by email or by phone. One time, I did an incorrect input for a transaction and the transaction was done. I called customer service immediately and they cancelled the transaction for me, although I needed to spend some time to explain my situation and problems during the encounter." *G8P9*

Dependency

Dependency on eBanking was discussed during the eBanker expert interviews. One eBanker, eB2, thinks that eBanking customers will be more dependent on eBanking because of its multifunctional capability, frequent interactions between customers and the eBanking system, and the positive involving experience of customer-eBanking interaction. Thus, the issue of dependency on eBanking is brought up for discussion in the customer focus group.

In the focus group, 50% of the participants agree with the view of dependency on eBanking, but another 50% disagree with it. Those participants who agree with the dependency think that it is the fact that customers and the service provider are always in an interdependent relationship. Customers depend on banks for financial services, and banks depend on customers for profit.

> "I depend on eBanking for financial services. It is no harm to me; at least it offers what I need." *G7P1*

> "I am getting used to logging on to my bank account via eBanking. I think I would have difficulties managing my finances without eBanking. eBanking is useful and enjoyable for me." *G7P5*

> "I have now become more independent, managing my bank accounts by depending on eBanking." *G8P5*

The reasons leading to the customers' eBanking dependency relationship are then discussed. The factors of "control", "interactivity" and "involvement" are suggested for discussion. Although these concepts are explained to group 7 and 8 participants, they might not have a complete comprehensive understanding of them. It is generally agreed that interactivity and involvement in customer-eBanking interaction might contribute to dependency. However, participants do not agree that control leads to dependency.

Participants who do not agree with the dependency relationship of customers of eBanking believe that dependency represents the inferior position of the customers in the customer-bank relationship. Some of the participants think that dependency represents addiction and subordination.

> "I am not addicted to the Internet and eBanking. I do not need to depend on eBanking, as there are many options for me to manage my bank accounts." *G7P5*

> "We use the eBanking service and pay for it. The bank depends on customers and not vice versa." *G8P6*

> "eBanking is a platform for us as bank customers to manage our accounts. We are now knowledgeable enough. I log on to my account only when I need to." *G8P9*

It is interesting that participants have diverse views on the dependency relationship. Thus it is worth further study. This dependency relationship is newly identified and has to be confirmed in an eService context.

Overall Satisfaction with Principal Bank

As reflected by the responses of the participants, they are generally satisfied with the eBanking service encounter. It is then worth looking at whether the eBanking service encounter satisfaction contributes to the overall satisfaction with the principal bank, i.e. from service encounter level to corporate level.

It is argued that customers with multiple encounters with the eBanking system and its service will accumulate and develop an overall perception of satisfaction or dissatisfaction with the service provider. For the current research, eBanking service providers are the principal banks that offer retail banking service to the public. Overall satisfaction with the service provider is an attitudinal construct. It is more enduring in nature than is the eService encounter satisfaction construct, which is transitory in nature.

In the focus group discussion, participants were asked to share their views regarding the possible impact of eBanking service encounter satisfaction on the principal bank.

> "I am satisfied with my bank. Its eBanking service and my good encounter experience must be the reason." *G7P2*

> "I believe those banks aim to improve customer satisfaction by offering eBanking services as an added value to customers." G7P4

> "eBanking, sure, it can help to keep customers for the bank. Its functions and features are also attractive for me." *G8P2*

> "My eBanking experience is good. I will continue to use it and I expect the banks will keep on improving the service as a whole and specifically the eBanking service." *G8P5*

> "I am happy with the eBanking service and the encounter experience. But I am not happy with the banking service as a whole. As eBanking becomes more popular, more customers shift to eBanking. However, the banks are cutting down on the number of retail branch outlets, which forces customers to shift to eBanking or other service options which require more time or higher cost. The offering of eBanking is not offering more choices to customers but limiting our choices. The bank should be more customer-oriented." *G8P9*

Most participants believe that eBanking service encounter satisfaction contributes to the overall satisfaction with the principal bank. However, some participants think that eBanking is replacing other options of service encounter, and it negatively influences the overall satisfaction with the principal bank. It is then worth further study of the relationship between eService encounter satisfaction and overall satisfaction with the principal bank.

Loyalty to the Principal Bank

Dick and Basu (1994) define loyalty as long-term commitment which involves repeated patronage and favourable attitude. Oliver (1997, 1999) claims that customers cross into the loyalty stage after a series of satisfying service encounters

with a service provider. In this loyalty stage, the service provider is considered to have built a continuing association or bond (i.e. relationship) with the customer.

Building and maintaining such a relationship with existing customers is very important for service providers. However, the situation in an eService context is more complicated than in traditional service encounters. Even eBankers have diversified views regarding loyalty as the outcome of eService encounter satisfaction, because they believe that the Internet and the eBanking platform lower the barrier or even encourage switching behaviour of customers amongst eService providers.

> "I have been using the eBanking service since its launch. I did not change my bank and eBanking. I believe this is a kind of loyalty." *G7P2*

> "When you are satisfied, you will keep your account and continue to patronise the bank. I agree that eBanking helps to keep me as a loyal customer." *G7P9*

> "I have a few eBanking accounts in different banks. Do you think that it is not loyal? Or do you think that it is loyal as long as I keep the accounts?" *G7P11*

> "I have three eBanking accounts. I usually use different eBanking accounts for specific purposes. For example, one eBanking account is for stock trading, as its eTrading platform is user-friendly, informative and personalised. Another one is for the management of my foreign currency. The third one is for my daily money management bill payment. To a certain extent, I am satisfied with these eBanking services and encounter experience. I think I am loyal, as I have been using these accounts for quite a long period of time." *G8P4*

> "I visit the bank's website regularly. Does it imply loyalty?" *G8P5*

> "I use the eBanking service because of the principal bank. Now, I will be more satisfied with the principal bank after using the eBanking. I would say it is the first choice on my list of financial service providers." *G8P6*

> "My encounter experience with eBanking affects my overall impression of and feeling about the service provider. eBanking is part of the bank and its performance affects the bank as a whole." *G8P8*

The responses of the participants show that they have different understandings and interpretations of loyalty; some of them consider loyalty from a behaviour perspective and some are using an attitudinal perspective. Participants in the focus group also believe that loyalty implies a long-term relationship between the service provider and the customers, involving not only transactions but also affection. Participants also support the view that the satisfaction of the eService encounter contributes to the overall satisfaction with the principal bank. These responses are in line with dual perspectives – attitudinal and behavioural loyalty – proposed by various researchers, such as Bloemer and de Ruyter (1998); Hallowell (1996); Eshghi, Haughton and Topi (2007).

Fisher (2001) suggests the basic criteria of a loyal bank customer – one that stays with the same service provider – is likely to take out new products with the bank and is likely to recommend the bank's services. Thus eBanking is probably a good tool to create loyalty as it has a lot of attributes to attract customers to take out new products.

Summary and Conclusion

In this chapter, both eBankers' and eBanking customers' views regarding eBanking service and the customer-eBanking interaction process and experience are discussed.

eBankers revealed that the emergence of eBanking brings them challenges as well as opportunities. Customer satisfaction remains a very high priority for eBanking service. As eBanking customers are becoming more knowledgeable about the Internet and eBanking, they expect more control, and to be more interactive and more involved in the customer-eBanking interaction. eBankers realise that, as a consequence, customers might become more dependent on eBanking and satisfied with the eBanking service encounter. eBankers also believe that eBanking dependency and eBanking service encounter satisfaction contribute to satisfaction with and loyalty to the principal bank.

From the eBanking customer side, most customers are satisfied with the eBanking service and with the eBanking interaction. In general, they agree that their control over the interaction, the interactivity and involvement during the interaction process contribute to eBanking service encounter satisfaction. Some customers agree with the possibility of eService dependency on eBanking while some do not agree. They also agree that their satisfaction with the eBanking encounter contributes to the

overall satisfaction with the principal bank. However, the contribution of eBanking service encounter satisfaction to loyalty to the principal bank remains a question.

To conclude, the findings from the eBankers' in-depth interviews and eBanking customers' focus group studies are useful to build the research model and develop the quantitative survey.

In Chapter Six (Quantitative Data Collection, Analysis and Findings), all the constructs and their dimensions are defined based on the findings in this chapter and Chapter Two (Literature Review). The quantitative data collection process is explained. The data analysis process and findings are also presented and elaborated.

CHAPTER 6

QUANTITATIVE DATA COLLECTION, ANALYSIS AND FINDINGS

This chapter covers the research process to verify the structural model. The sampling process, method of study, instrument development and data collection procedure are discussed. It also describes the statistical analysis of the data collected. It explains the procedures for analysing the data and reports the results of hypotheses testing and measures assessment. Structural equation modelling (SEM) was chosen as the analytical technique. In order to conduct the analysis process systematically, the six stages in structural equation modelling proposed by Hair, Black, Babin and Anderson (2010) are followed.

Statistical Analysis Tools Used for Data Analysis

Due to the complex nature of the proposed research model, SEM was used to test the model's validity. This procedure allows a researcher to test the proposed structure of a model as a whole for the set of relationships between dependent variables and independent variables. Each theoretical construct is covered by a set of multiple manifest items in the questionnaire.

The reference instruments of this research were adopted from the constructs used in various authoritative research studies related to technology acceptance, flow, control, involvement, interactivity, satisfaction and loyalty. These instruments have

been widely applied and accepted in many research studies. Thus, SEM has strong theoretical support for its validity. This makes it highly appropriate for a confirmatory data analysis to test the validity of the proposed model. The hypothesised structural equation model in the current research is tested by using LISREL for Windows with the covariance matrix as the input. A brief introduction to SEM is presented in the following section.

Structural Equation Modelling

SEM is a statistical methodology that takes a confirmatory (hypothesis-testing) approach to the multivariate analysis of a structural model bearing on some phenomenon (Byrne, 1998). Researchers use SEM to determine the validity of a model.

SEM is a covariance structure analysis that combines confirmatory factor analysis (CFA) and econometric modelling for the purpose of analysing hypothesised relationships among latent variables measured by manifest indicators. In SEM, researchers usually focus on latent constructs rather than on the manifest variables used to measure these constructs. Latent constructs refer to unobserved or theoretical constructs, such as abstract psychological variables. Manifest variables refer to observed or empirical variables, because these variables reflect latent variables known as reflective indicators. Measurement is recognised as difficult and

error-prone. By explicitly modelling measurement error, SEM helps to derive unbiased estimates for the relationships between latent constructs. Thus SEM allows multiple measures to be associated with a single latent construct.

A structural equation model implies a structure of the covariance matrix of the measurements. Once the model's parameters have been estimated, the resulting model-implied covariance matrix can be compared to an empirical or data-based covariance matrix. Then the CFA confirmation is accomplished by comparing the computed covariance matrix implied by the hypothesised model to the actual covariance matrix derived from the empirical data. If the two matrices are consistent with one another, then the structural equation model can be considered a plausible explanation for relationships between the measurements.

Thus a full covariance structural model is typically composed of two parts: the measurement model and the structural model. The measurement model describes how each latent variable is measured or operationalised by corresponding manifest indicators. It also provides information regarding the validity and reliability of the observed indicators. The structural model describes the relationships between the latent variables themselves and indicates the amount of unexplained variance.

SEM was chosen to test the structural model for its appropriateness for the current research. As the research model comprises many paths, SEM provides an

estimation for a series of separate regression equations simultaneously (Hair, Anderson, Tatham, and Black, 1998). Also, due to the interdependent natures of the research variables, SEM is particularly useful when dependent variables become independent variables in subsequent dependence relationships (Hair et al., 1998).

SEM is also excellent, as it allows for the specification and testing of complex path models that incorporate sophisticated thought patterns. It is considered more rigorous and more flexible than comparable techniques on multiple regression analysis (Kelloway, 1998). It provides a unique analysis that simultaneously considers questions of both measurement and prediction. For the typical "latent variable models", SEM provides a flexible and powerful means of simultaneously assessing the quality of measurement and examining predictive relationships among constructs. For doing a CFA and path analysis at the same time, SEM allows researchers to frame increasingly precise questions about the phenomena in which they are interested. Such analyses offer considerable advantages for estimating predictive relationships among latent constructs.

Research Process:

The Six-Stage Process for Structural Equation Modelling

Hair et al. (2010) propose a six-stage process for SEM:

- Defining individual constructs
- Developing and specifying the overall measurement model
- Designing a study to produce empirical results
- Assessing the measurement model validity
- Specifying the structural model
- Assessing the structural model validity.

To present the process and analysis systematically, this chapter follows these six stages to discuss and explain the modelling and data analysis process for the current research.

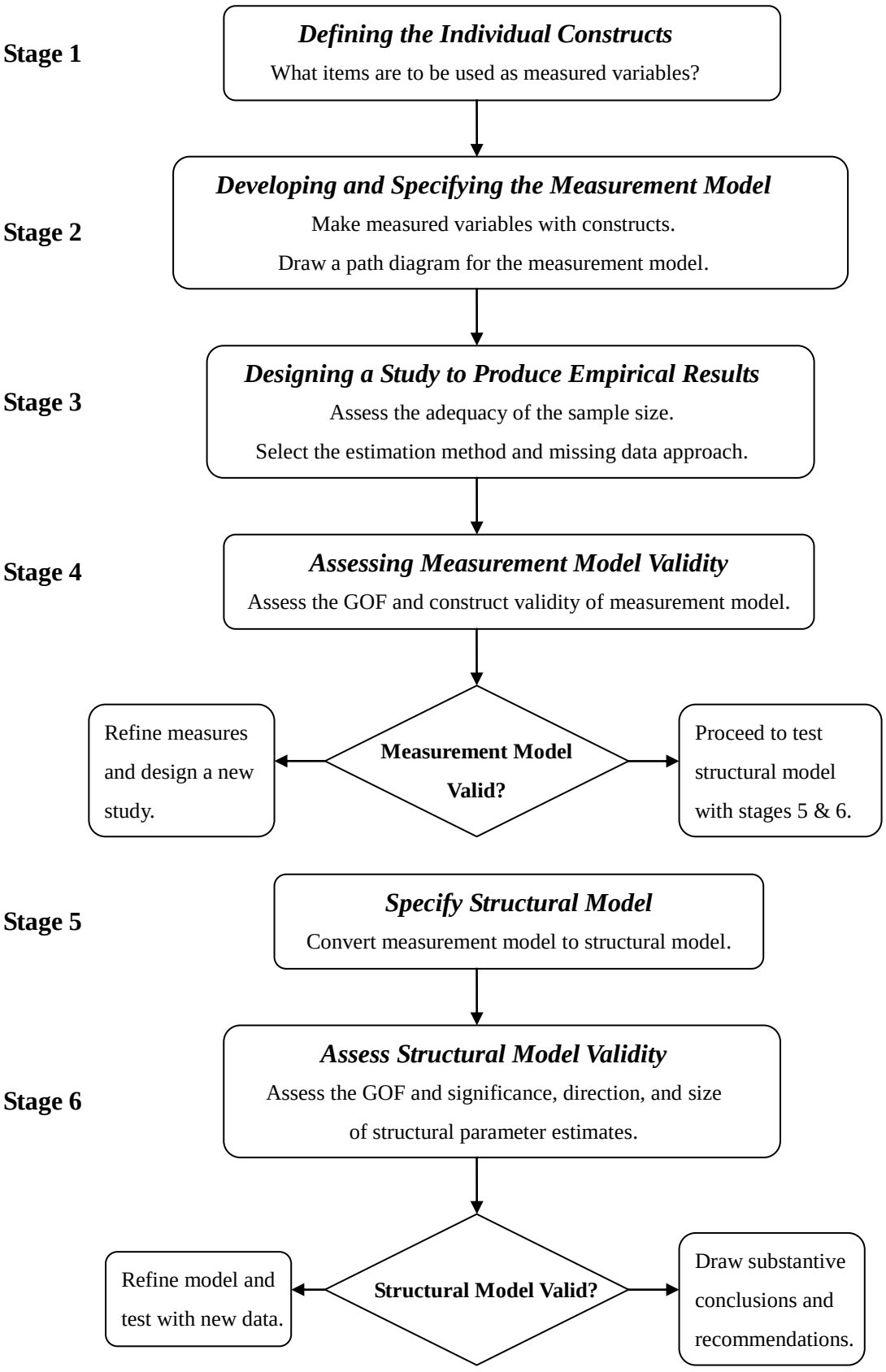


Figure 6.1 The Six-Stage Process for Structural Equation Modelling
Source: Hair et al. (2010), p. 654

Defining the Individual Constructs

In this stage, constructs are defined and operationalised. With reference to the research questions, relevant literature, and the findings from the expert interviews and focus group studies with eBankers and eBanking customers respectively, the current research is designed focusing on seven key constructs: interactivity, control, involvement, eService dependency, eService encounter satisfaction, overall satisfaction and loyalty. These constructs comprise the measurement model.

Most constructs, including involvement, control, interactivity, service encounter satisfaction, overall satisfaction and loyalty have been well studied in traditional marketing or communication research. However, for the current research studying eService, their definitions have to be modified in order to reflect their specific characteristics in the eService context.

Based on the literature review and qualitative interview results, these seven constructs along with their definitions are as follows:

- *Interactivity* (*ITA*). Interactivity is a perception of customers with eBanking interaction in the eService context. Sender-receivers are cognitively involved in a two-way, personalised communication process with a high degree of responsiveness.
- *Control* (*CNT*). Control represents the determination of eBanking customers in

the customer-eBanking interaction process. The eBanking customers perceive that the eBanking system is manageable with their Internet skills for the completion of certain banking tasks online.

- *Involvement* (*IVM*). Involvement is the psychological state of the users deeply concentrating on the online navigation with a high degree of interest.
- *eService Dependency* (*EDP*). eService dependency is the very high tendency of eBanking customers using eBanking to meet action orientation goals of banking instead of other options of banking.
- *eService Encounter Satisfaction* (*ESAT*). eService encounter satisfaction is the outcome achieved when a customer finds pleasurable experience in the process of customer-eBanking interaction and the fulfillment of his or her goals.
- *Overall Satisfaction with the Principal Bank* (*SAT*). Overall satisfaction with the principal bank is the eBanking customers' cumulative pleasurable experience with the overall service of the principal bank over time.
- *Loyalty to the Principal Bank* (*LOY*). Loyalty to the principal bank is the attitudinal commitment and behavioural action of customers to using the products/services offered by the principal bank repeatedly in the future.

Operationalising the Constructs

Based on the above definitions, these constructs are then operationalised by selecting appropriate indicators and scale type. Most of these indicators are developed by modifying the existing indicators used by previous research studies. This approach has the advantage of a high degree of specificity and validity.

The indicators developed for *Interactivity* (*ITA*) are based on Liu (2003). The indicator items developed for *Control* (*CNT*) are mainly based on Venkatesh and Davis (1996), Devaraj et al. (2002) and Novak et al. (2000); some items are newly developed. The indicator items developed for *Involvement* (*IVM*) are based on Webster et al. (1993), Ghani and Deshpande (1994) and Childers et al. (2001). The indicator items for *eService Dependency* (*EDP*) are newly developed based on Patwardhan and Ramaprasad (2005), and Patwardhan and Yang (2003). The indicator items developed for *eService Encounter Satisfaction* (*ESAT*) are based on Keaveney and Parthasarathy (2001). The indicator items developed for *Overall Satisfaction with the Principal Bank* (*SAT*) are based on Keaveney and Parthasarathy (2001), and Hu and Yang (2006). The indicator items developed for *Loyalty to the Principal Bank* (*LOY*) are based on Ganesh et al. (2000) and Sudhahar et al. (2006).

Developing and Specifying the Overall Measurement Model

In this stage, an overall measurement model is developed with seven latent constructs. Respective measured indicator variables are assigned to each latent construct.

The first step in specifying the model is to clarify exactly what relationships the model proposes. Figure 6.2 is a path diagram of the hypothesised measurement model. The circles represent the theorectical latent constructs formulating the eService model. The observed indicators are listed under each latent construct. Each indicator is hypothesised to be affected by the latent construct. The latent constructs might be correlated.

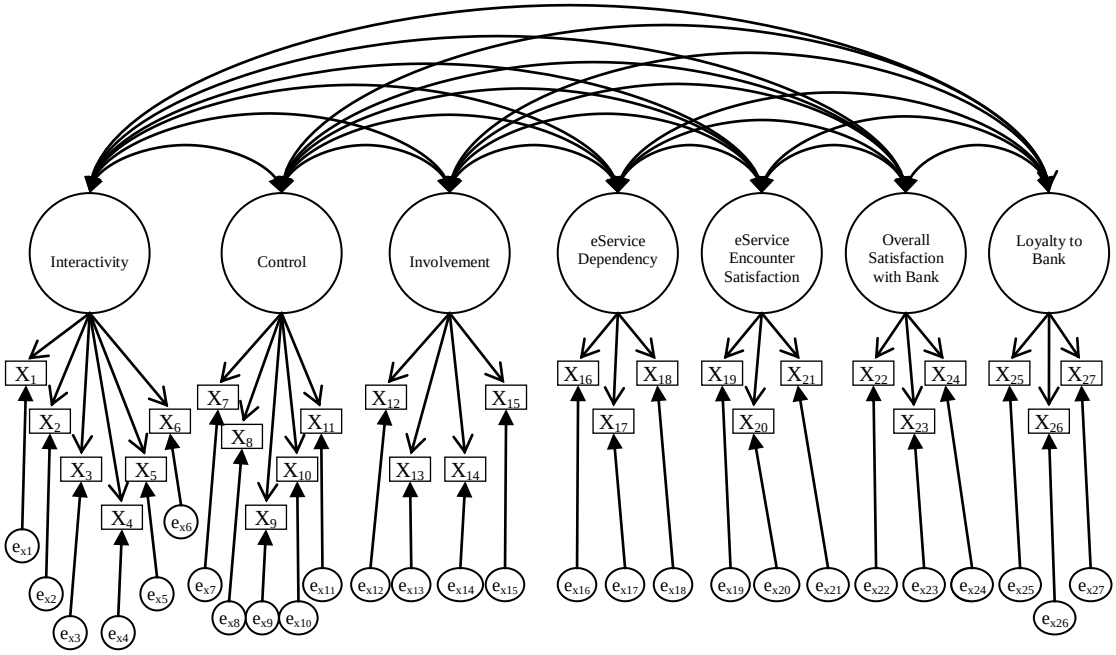


Figure 6.2 Path Diagram Showing Hypothesised Measurement Model Specification (CFA Model)

All constructs are allowed to correlate with all other constructs. All measured items are allowed to load on only one construct. Error terms are not allowed to relate to any other measured variable. The measurement model is congeneric.

Originally, the model displayed seven latent constructs, with 34 indicator variables after operationalisation. But after the face validity test (discussed in the following section), seven indicator variables were removed. Consequently, interactivity was measured by six indicators, control by five indicators, involvement by 4 indicators, and the other four constructs were measured by three indicators each. Thus there are 27 indicators in total. The number of indicators is in line with a minimum of three indicators per construct as proposed by Hair et al. (2010). The measurement model is overidentified. All indicators are also hypothesised as reflective. The overall measurement model has more degrees of freedom than paths to be estimated. Given the number of indicators and a sufficient sample size, no problems with the rank condition were expected.

The parameters were estimated using the maximum likelihood (ML) method with the covariance matrix produced by PRELIS 2.30.

Data Collection: Designing a Study to Produce Empirical Results

This stage involves research design and data collection.

Samples and Sample Size

The determination of the appropriate sample size is a critical aspect for quantitative research. According to Hair et al. (2010), there are five factors affecting the required sample size for SEM: multivariate normality of the data, estimation technique, model complexity, missing data and average error variance of indicators. Ding, Velicer and Harlow (1995) indicate that numerous studies consider 100 to 150 subjects to be the minimum acceptable sample size when conducting structural equation modelling. Kelloway (1998) and Hair et al. (1998) suggest a sample size of at least 200 as an appropriate minimum. Boomsma (1983) recommends a sample size of approximately 400 for models of moderate complexity. For regression analyses, Bentler and Chou (1987) suggest that the ratio of sample to parameter should be between 5:1 and 10:1. SEM is a large sample approach to data analysis. In addition to these views, the general principle that larger samples will produce a more stable result still applies.

After considering the views from these researchers together with budget and time constraints, the target sample size for the current research was set at 300. This sample size exceeds the recommended minimum suggested by most researchers

(Bentler and Chou, 1987; Ding et al., 1995; Hair et al., 1998; Kelloway, 1998). In addition, there are more than 30 subjects per construct, which exceeds the minimum ratio of respondents to variables (15 to 1 as indicated by Hair et al., 1998).

Samples and Sampling Frame

The samples are the current eBanking customers in Hong Kong, which implies that anyone who holds at least one eBanking account in any bank is part of the target sample. According to statistics from the HKMA, there are 4.9 million personal eBanking accounts in Hong Kong. As eBankers reveal that an eBanking customer holds an average of three banking accounts, it can be estimated that there are about 1.6 to 2 million eBanking customers. As it is impossible to acquire the complete list of eBanking customers, the telephone directory was used as the sampling frame.

Sampling Method

To ensure the representativeness of the sample, the random sampling method was adopted. In order to select a random sample for the telephone survey, the Chinese computer-aided-telephone interviewing (CATI) system was used to generate phone samples from the telephone pool of households in Hong Kong, Kowloon, the New Territories and Lantau Island created from the Hong Kong Telephone Directory. After the phone samples were automatically generated, the last two digits of the

telephone numbers were replaced by two random numbers. When the phone was answered, the question regarding the number of family members aged 18 or above using eBanking was asked. If there was more than one adult family member using eBanking, then the CATI system randomly selected one of them to participate in the survey. If there was no family member using eBanking, then the interview stopped. If there was no answer to the phone call, at least three attempts were made, to enhance the response rate.

Method of Data Collection

A telephone survey was considered to be appropriate for the current research. Surveys are suitable for gathering consumers' information on perceptions and attitude. It is also appropriate for a large number of samples. It is an affordable and efficient means of gathering information from the targeted population (Zikmund, 2000).

Questionnaire as the Instrument for Data Collection

Latent constructs were operationalised by adapting the validated items from prior research. Most items were modified with reference to the findings and analysis from eBankers' interviews and eBanking customers' focus group studies, but a number of items were newly developed. This approach can enhance the specificity of the questionnaire for eService.

The questionnaire consists of four parts. The first part is the questions on respondents' behaviour and usage pattern of eBanking and other banking services options. The second part is the main body of the questionnaire and includes questions that ask the respondents about interaction with and usage experience of eBanking, and the level of their eService dependency and eService encounter satisfaction in respect to eBanking service. The third part includes questions that ask the respondents' level of overall satisfaction with and loyalty to the principal bank offering eBanking service. The fourth part includes questions on respondents' socio-economic background.

All indicator measurements in the main body, i.e., the second and third parts of the questionnaire, use a 5-point, agree-disagree Likert scale to ensure statistical variability among survey responses for all constructs.

The questionnaire was originally developed in English, but Cantonese was used in the actual data collection. The questionnaire was translated into Chinese and then translated back into English, in order to ensure the English version and the Chinese version of the questionnaire are identical. Two interpreters were used in this process. There were some minor changes in the wording of the Chinese version in the translation process.

Face Validity

As constructs and indicators were modified or newly developed, a face validity test was conducted in which four independent judges were invited to participate. Two of them are academics from business management and two are eBanking customers who have postgraduate education. They were given the definitions of the constructs and then asked to match the indicators with the construct names. Most of the indicators were correctly matched to the respective constructs, except seven. Another face validity test with one academic and one eBanking customer was conducted after these seven indicators were deleted. As no judge had difficulty in matching all items to constructs this time, the face validity of the indicators was then confirmed. The final number of indicators was 27.

Pilot Test

A pilot test was conducted before the execution of data collection. It aimed to evaluate the clarity and appropriateness of the wording and questions in the questionnaire. It also helped to examine the reliability of the questionnaire.

Two pretests were conducted. The first was conducted in a focus group consisting of six part-time MBA students. They were asked to complete the questionnaire and then asked to evaluate it and give opinions and comments regarding its general clarity. In general, all students felt that the questionnaire was

clear and easy to understand. Based on their feedback, some words were replaced and some questions were rephrased for clarity.

The second pretest was conducted with another 46 part-time MBA students at the same local university. They are currently eBanking customers. The purpose of this pretest was to examine the reliablity of the instrument. Based on their questionnaire, a reliablity test using SPSS was run. All Cronbach alpha coefficients are above 0.70, indicating the instrument is reliable. Thus the questionnaire was deemed ready for data collection. Table 6.1 lists all the observed indicators and the respective latent constructs.

Table 6.1 Latent Constructs and Observed Indicators

Interactivity (ITA)		**Indicators**
ITA_1	The eBanking site facilitates two-way communication between the bank and me.	Two-way communication
ITA_2	The eBanking site can be accessed quickly.	Responsiveness
ITA_3	I get instant responses from the eBanking site.	Responsiveness
ITA_4	The eBanking site offers me interactive communication.	Interactive communication
ITA_5	The eBanking site offers me personalised information that fits my specific needs.	Personalisation
ITA_6	The eBanking site offers me personalised communication that fits my specific needs.	Personalisation

Control (CNT)		
CNT_1	I believe I am very skillful at using the eBanking service.	Perceived skilfulness
CNT_2	I consider myself knowledgeable about good techniques for using the eBanking service.	Perceived skilfulness
CNT_3	I can complete the banking tasks I plan to complete by using the eBanking service.	Task completion
CNT_4	I can complete banking tasks accurately by using the eBanking service.	Task completion
CNT_5	I can complete banking tasks quickly by using the eBanking service.	Task completion
Involvement (IVM)		
IVM_1	I am interested in browsing the eBanking site.	Intrinsic interest
IVM_2	My experience of navigating the eBanking site is interesting.	Intrinsic interest
IVM_3	The eBanking site offers me a self-directed environment to navigate.	Navigation
IVM_4	The eBanking site offers me a free environment to conduct banking activities.	Navigation
eService Dependency (EDP)		
EDP_1	eBanking is the most useful platform for me to make banking and financial decisions in my daily life.	Dependency
EDP_2	eBanking is the most useful platform for me to manage my bank account in my daily life.	Dependency
EDP_3	eBanking is the most useful platform for me to plan my personal finances in my daily life.	Dependency
eService Encounter Satisfaction (ESAT)		
$ESAT_1$	I am satisfied with my encounter experience with the eBanking service.	Encounter satisfaction
$ESAT_2$	The eBanking service fulfills my banking needs.	Encounter satisfaction
$ESAT_3$	In general, I am happy with my eBanking experience.	Encounter satisfaction

Overall Satisfaction with the Principal Bank (SAT)		
SAT_1	Overall, I am very satisfied with the bank with the eBanking service I am using.	Overall satisfaction
SAT_2	Overall, I am very satisfied with the service provided by the bank with the eBanking service I am using	Overall satisfaction
SAT_3	I am happy with the overall service experience delivered by the bank with the eBanking service I am using.	Overall satisfaction
Loyalty to the Principal Bank (LOY)		
LOY_1	I would recommend the bank with the eBanking service to other people.	Behavioural loyalty
LOY_2	I would continue to patronise the bank with the eBanking service, even if the service charges are increased moderately.	Behavioural loyalty
LOY_3	My continued association with the bank with the eBanking service is important to me.	Attitudinal loyalty

The questionnaire can be found in Appendix C.

Data Collection

Data collection was conducted by a research institute in a local university with the support of a research fund from the same university. It took place in the evenings of 16, 17, 18 and 19 January 2007. The CATI system was used for data collection and it enabled the online supervision of the data collection process. Of the 599 persons successfully contacted, 292 were successfully interviewed. The response rate is 48.7% (292/599 × 100%). The margins of error are estimated to be ±6.2% at 95% confidence level.

Findings and Results

In this section, the theoretical model of eService is empirically tested using the data collected from the repondents in the telephone survey. This covers the fourth to the sixth stages in the process for SEM – assessing the measurement model validity, specifying the structural model and assessing the structural model validity, according to Hair et al. (2010).

Data collection is followed by data analysis. First of all, a demographic description of the respondents who participated in the research is initally reported. After that, two stages of analysis have to be done: assessment of the measurement model and assessment of the structural model. In the stage of assessing measurement model validity, construct reliability and validity is examined.

As the data were collected by telephone interview, there is a very low percentage of missing values. There is also no specific pattern of missing data and it represents data missing completely at random (MCAR). Surveys with missing data were eliminated and only surveys without missing data were processed. The final number of surveys for further processing and analysis is 280.

Analysis of Descriptive Data

In this section, a descriptive analysis of the sample is conducted. The analysis identifies and discusses the demographic characteristics of the sample in general, and

specifically their banking and eBanking usage conditions. Mean and standard deviation are presented to compare the demographic differences between different eBanking user groups. Cross-tabulation tables are set to investigate the conditional distribution between eBanking usage experience and other eBanking usage behaviour variables. Chi-Square Tests are then used to examine the assocation between these variables.

Demographic Profile and Characteristics of the Respondents

Their demographic details and banking information are provided in Table 6.2, Table 6.3 and Table 6.4 respectively.

Table 6.2 Demographics of Respondents: Frequency and Percentage

Demographic Variables (N = 280)	Frequency	%
Gender of Respondents		
Male	157	56.1
Female	123	43.9
Age		
18 to 25	48	17.1
26 to 40	132	47.1
41 to 55	94	33.6
56 to 65	6	2.1
66 and over	0	0
Personal Monthly Income		
$9999 or below	60	21.4
$10000 to $19999	94	33.6
$20000 to 29999	73	26.1
$30000 to 39999	28	10.0
$40000 or above	25	8.9

Education Level		
Primary School	11	3.9
Secondary School	56	20.0
College	25	8.9
University	106	37.9
Graduate School or above	77	27.5
Other	5	1.8
Computer Usage Experience		
Less than 1 year	1	0.4
1 to 5 years	36	12.9
6 to 10 years	69	24.6
More than 10 years	174	62.1

Table 6.3 Demographics of Respondents: Mean & Standard Deviation by User Groups

Types of eBanking Users	**Novice**[1]		**Experienced**[2]		**Expert**[3]	
	Mean	*Standard Deviation*	*Mean*	*Standard Deviation*	*Mean*	*Standard Deviation*
Age	40.11	7.56	34.51	6.44	33.06	4.31
Personal Monthly Income	23453.12	3153.12	19561.16	4766.15	20648.58	4112.66
Computer Usage Experience	10.66	2.63	11.07	2.28	11.96	2.72
Weekly eBanking Log-in Frequency	6.73	1.66	8.66	2.96	15.66	5.19
Weekly eBanking Transaction Frequency	3.16	0.97	5.67	1.65	8.26	1.99

Table 6.4 Banking Behaviour of Respondents

Banking Behaviour (N = 280)	Frequency	%
eBanking Usage Experience		
Novice Users[1]	53	18.9
Experienced Users[2]	123	43.9
Expert Users[3]	104	37.1
The Principal Bank		
Hongkong and Shanghai Banking Corporation Limited (HSBC)	149	53.2
Hang Seng Bank, Limited (HSB)	74	26.4
Bank of China (Hong Kong) Limited (BC)	20	7.1
Standard Chartered Bank (Hong Kong) Limited (SCB)	18	6.4
Bank of East Asia, Limited (BEA)	8	2.9
DBS Bank (Hong Kong) Limited (DBS)	3	1.1
Others	8	2.8
The Most Frequently Used eBanking		
HSBC	162	57.9
HSB	68	24.3
BC	19	6.8
SCB	14	5.0
BEA	8	2.9
DBS	3	1.1
Others	6	2.1
Primary Option of Banking Service		
eBanking	166	59.3
bBanking[4]	27	9.6
pBanking[5]	13	4.6
ATM	74	26.4
Primary Option of Customer-Bank Interaction		
eBanking	157	56.1
bBanking	40	14.3
pBanking	21	7.5
ATM	62	22.1

Weekly eBanking Log-in Frequency		
7 times or less	109	38.9
8 to 14 times	98	35.0
15 to 21 times	56	20.0
22 to 28 times	11	3.9
29 or above	6	2.1
Frequency of Weekly eBanking Transaction		
3 times or less	93	33.2
4 to 7 times	120	42.9
8 times to 14 times	53	18.9
15 times or above	14	5.0

[1] Novice users represent eBanking customers with less than 1 year of eBanking usage experience

[2] Experienced users represent eBanking customers with more than 1 year but less than 3 years eBanking usage experience

[3] Expert users represent eBanking customers with more than 3 years of eBanking usage experience

[4] bBanking represents branch banking

[5] pBanking represents phone banking

Demographic characteristics. Frequency distributions of the samples are calculated and summarised in Table 6.2. These frequency distributions include data on gender, age, education, income and computer usage experience. Their respective mean and standard deviation in different eBanking user groups are presented in Table 6.3.

According to their eBanking usage experience, the sample is segmented into three groups: novice users (with less than one year eBanking usage experience), experienced users (with 1 to 3 years eBanking usage experience), and expert users (with more than 3 years eBanking usage experience). This segmentation facilitates

the comparison of differences between different user groups.

Among the 280 respondents, 56.1% are male while 43.9% are female. Nearly half of them (47.1%) are 26 to 40 years of age, followed by the age group of 41 to 55 (33.6%). These two age groups (i.e. 26 to 55 years of age) account for 80% of the overall total in terms of age. The age groups of 18 to 25 (17.1%) and 56 to 65 (2.1%) account for the other 20%. Among the three groups of eBanking users (novice users, experienced users and expert users), expert users have the lowest mean of age 33.6 (SD 4.31). Experienced users have a higher mean of 34.51 (SD 6.44) while novice users have the highest mean of 40.11 (SD 7.56). It reflects the fact that the younger generation is very experienced in using eBanking.

With regards to personal monthly income, more that half of the respondents (59.7%) belong to the middle income group having a personal monthly income between HK$ 10000 to HK$ 29999. The low income group (i.e. personal monthly income HK$ 9999 or below) accounts for 21.4% of the respondents, while 18.9% of the respondents belong to the high income group of HK$ 30000 or above. Among the three groups of eBanking users, novice users have the highest mean of personal income of HK$ 23453.12 (SD 3153.12), followed by expert users – HK$ 20648.58 (SD 4112.66) and experienced users – HK$ 19561.16 (SD 4766.15).

Among the 280 respondents, the majority of them (65.4%) have an education

level of university or above, while 28.9% of the respondents have college or secondary level of education. It reflects that they are well educated in general.

For the computer usage experience, 62% of the respondents have computer usage experience of more than 10 years. Respondents with 6 to 10 years of computer usage experience account for 24.6%. Thus these two groups (i.e. computer usage experience of 6 years or above) account for 86.6% of the respondents. Only 12.9% and 0.4% of the respondents have 1 to 5 years and less than 1 year experience respectively. It reflects that the majority of the respondents are well experienced in using computers. Such a characteristic is important for effective use of computers and the Internet as tools for service or information acquisition.

As reflected in Table 6.3, the expert users have the highest mean of computer usage experience, 11.96 (SD 2.72), among the three groups of eBanking users. Not far behind, experienced users have the mean of 11.07 (SD 2.28) while novice users have the lowest mean of 10.66 (SD 2.63). It is not uncommon that expert users of eBanking would have the highest mean of computer usage experience, although the means of the three user groups are close.

Banking behaviour. In addition to their demographic information, respondents are also asked for information regarding their banking behaviour (Table 6.4). Among the 280 respondents, 43.9% are experienced users and 37.1 are expert users. These

two groups already account for 81% of the total in terms of eBanking usage experience. Novice users account for only 19%. It reflects that the majority of the respondents are at least experienced users of eBanking.

HSBC is the most popular bank of the respondents. It is the principal bank and the most frequently used eBanking services for more than half of the respondents (53.2% and 57.9% respectively). The second most popular bank is Hang Seng Bank (HSB), a subsidary of HSBC in Hong Kong. It is the principal bank of 26.4% of the respondents. It is the most frequently used eBanking service of 24.3% of the respondents.

As HSBC and HSB accounts for around 80% of the respondents' principal bank and most frequently used eBanking service, other banks (including Bank of China, Standard Chartered Bank, Bank of East Asia, DBS Bank and others) only account for the remaining 20%. These figures reflect the leadership position of HSBC and HSB in retail banking and eBanking.

Among the 280 respondents, 59.3% use eBanking as the primary option of banking service, while 26.4% use ATM, 9.6% use branch banking and 4.6% use phone banking as the primary option of banking service respectively.

In line with the situation of primary option of banking service, 56.1% use eBanking as the primary option of customer-bank interaction, while 22.1% use ATM,

14.3% use branch banking and 7.5% use phone banking as the primary option of customer-bank interaction respectively.

As reflected from the weekly eBanking log-in frequency, 38.9% of the respondents log-in to their eBanking account 7 times or less within a week and 35% of them log-in 8 to 14 times within a week. These show that most (73.9%) are regular users of eBanking for the purpose of information acquisition. The other 20% of the respondents log-in 15 to 21 times within a week, while another 6% log-in more than 22 times. These 26% are assumed to be heavy users of eBanking for information purposes.

In line with the situation of the weekly eBanking log-in frequency, 33.2% of the respondents conduct transactions 3 times or less within a week while 42.9% conduct transactions 4 to 7 times within a week. Thus majority of the respondents (76.1%) are regular transaction executors. The other 18.9 of the respondents conduct transactions 8 to 14 times while another 5% conduct transactions 15 times or more. These 23.9% are considered as the heavy transaction executors of eBanking.

Among the three groups of eBanking users, expert users have the highest mean in both weekly eBanking log-in frequency (mean 15.66; SD 5.19) and weekly eBanking transaction frequency (mean 8.26; SD 1.99). Expert users' weekly log-in frequency is much higher than those of experienced users (mean 8.66; SD 2.96) and

novice users (mean 6.73; SD 1.66). Expert users' weekly eBanking transaction frequency is also much higher than those of experienced users (mean 5.67, SD 1.65) and novice users (mean 3.16; SD 0.97). Therefore, the expert users are considered as the heavy users of eBanking service, as they have the highest mean of computer usage experience, weekly eBanking log-in frequency and weekly eBanking transaction frequency.

The following sections further explore the relationship between eBanking usage experience and banking behaviour.

Relationship between eBanking Usage Experience and Banking Behaviour

Cross-tabulation is used to investigate the conditional distribution between eBanking usage experience and banking behaviour variables, including the primary option of customer-bank interaction of the respondents, their frequency of weekly eBanking log-in and their frequency of weekly eBanking transaction. Pearson's Chi-square test for Independence is then used to test if there are associations between eBanking usage experience and banking behaviour.

If the p-value for the test is small enough (0.05 or less), there are probably some associations between the two variables; otherwise, there is no evidence to suggest any associations between the two.

Table 6.5 Conditional Distribution for Customer-Bank Interaction

		Primary Option of Interaction				
		eBanking	***bBanking***	***pBanking***	***ATM***	**Total**
Novice Users	**Count**	23	8	1	21	53
	% within user	43.4%	15.1%	1.9%	39.6%	100.0%
Experienced Users	**Count**	70	11	9	33	123
	% within user	56.9%	8.9%	7.3%	26.8%	100.0%
Expert Users	**Count**	73	8	3	20	104
	% within user	70.2%	7.7%	2.9%	19.2%	100.0%
Total	**Count**	166	27	13	74	280
	% within user	59.3%	9.6%	4.6%	26.4%	100.0%

Regardless of the eBanking usage experience, eBanking is the primary option of interaction; the percentages are 43.4%, 56.9% and 70.2% respectively (Table 6.5). Not surprisingly, more expert users prefer to use eBanking than other users. Novice users tend to select branch banking as their primary option while the choices of the experienced users are similar to the overall distribution.

Table 6.6 Conditional Distribution for eBanking Log-in Frequency

		Log-in Frequency					
		< 7	***8-14***	***15-21***	***22-29***	***> 29***	**Total**
Novice Users	**Count**	28	23	2	0	0	53
	% within user	52.8%	43.4%	3.8%	0.0%	0.0%	100.0%
Experienced Users	**Count**	44	43	28	7	1	123
	% within user	35.8%	35.0%	22.8%	5.7%	0.8%	100.0%
Expert Users	**Count**	37	32	26	4	5	104
	% within user	35.6%	30.8%	25.0%	3.8%	4.8%	100.0%
Total	**Count**	109	98	56	11	6	280
	% within user	38.9%	35.0%	20.0%	3.9%	2.1%	100.0%

The frequencies for log-in are quite different among users. As described in Table 6.6, the percentage of heavy log-in users (weekly frequency larger than 22 times) are 0%, 6.5%, 8.6% in novice, experience, expert groups respectively. Obviously more expert users log-in to the eBanking service for information acquisition.

Table 6.7 Conditional Distribution for Weekly eBanking Transaction Frequency

		Transaction Frequency				
		< 3	***4-7***	***8-14***	***> 15***	**Total**
Novice Users	**Count**	23	26	3	1	53
	% within user	43.4%	49.1%	5.7%	1.9%	100.0%
Experienced Users	**Count**	41	52	24	6	123
	% within user	33.3%	42.3%	19.5%	4.9%	100.0%
Expert Users	**Count**	29	42	22	11	104
	% within user	27.9%	40.4%	21.2%	10.6%	100.0%
Total	**Count**	93	120	53	14	280
	% within user	33.2%	42.9%	18.9%	5.0%	100.0%

Similar to eBanking log-in frequency, the conditional distributions for weekly eBanking transaction frequency are quite different among the user groups (Table 6.7). Novice users seldom use online transactions when compared to experienced users and expert users. About 43% of the novice users transact via eBanking less than 3 times per week while the usage experience will increase the figure, as shown in Table 6.7.

Table 6.8 Chi-Square Tests

eBanking Usage Experience	Pearson Chi-Square	df	p-value (2-sided)
Principal Bank	18.71	16	.568
Most Frequently Used eBanking	17.79	16	.673
Primary Option for Banking Service	14.61	6	.047
Primary Option for Bank Interaction	15.55	6	.034
Weekly eBanking Log-in Frequency	22.24	8	.009
Weekly eBanking Transaction Frequency	15.90	6	.028

According to Table 6.8, the variables Principal Bank and Most Frequently Used eBanking have p-values larger than 0.05 while all others are below the cut-off point. Therefore, the eBanking usage experience of a person is concluded to have association with Primary Option for Banking Service, Primary Option for Bank Interaction, Weekly eBanking Log-in and Transaction Frequency; while variables Principal Bank and Most Frequently Used eBanking, are believed to be independent with eBanking usage experience.

Assessing the Measurement Model Validity

After the discussion of the demographic characteristics and the banking behaviour of the samples, the following section will assess the validity of the measurement model step by step.

Data Examination

All multivariate analysis techniques require data to meet certain criteria, such as normality, homoscedasticity and linearity. Particular attention was given to assess the multivariate normality of the data due to the sensitivity of SEM on the distributional characteristics of the data (Hair et al., 1998).

To examine normality, the data were screened by SPSS. Z-scores of skewness indicate that most variables possess a distribution that is slightly skewed to the right and has a positive bias. According to Peterson and Wilson (1992), the self-reported measures of consumer satisfaction are uniformly skewed to the right, and the majority of the survey respondents reported satisfaction. The current research also has such negative skewness. Peterson and Wilson (1992) suggest that researchers should pay attention to such a situation while determining the research methodology and drawing conclusions from the data.

Model Estimation Approach

The model structure and estimation technique have to be determined in order to set up the SEM analysis. Path diagrams are used to specify the model parameters to be estimated.

For the current research, in order to test the reliability and validity of the eService Model, the 27 items used to measure the customers' interaction experience

of and attitude to eBanking and the principal bank were subjected to confirmatory factor analysis using LISREL 8.30.

Regarding the estimate technique, maximum likelihood estimation (MLE) was used, as it is flexible and is the most common approach to parameter estimation in which the most likely parameter values to achieve the best model fit are found (Hair et al., 2010; Anderson & Gerbing, 1988; Hair et al,. 1998; Kelloway, 1998). It has also been found to be consistent and efficient in large samples (Bollen, 1989). Thus MLE was used for the current research.

Refinement and Validation of Scale Items

As most of the measurement items were modified, they may not have the desired psychometric properties. To improve validity and reliability, the scales were purified and the inappropriate items were removed.

Following the approach used by Anderson and Gerbing (1988), the measurement model was tested and refined using confirmatory factor analysis (CFA). CFA was used to test whether the measured items reliably reflected the hypothesised latent constructs.

Unidimensionality

Unidimensionality is a necessary prerequisite for reliability and validity analyses (Nunnally, 1988). A construct is unidimensional if its constituent items

represent one underlying trait. In another words, a set of items are strongly associated with each other and can be explained by only one construct in the model. In confirmatory factor analysis, specifying a measurement model that defines the relationship between each construct and its constituent items is a test of unidimensionality.

Cronbach's alpha measures how well a set of items measures a single unidimensional latent construct. When data have a multidimensional structure, Cronbach's alpha will usually be low.

Reliability

Unidimensionality alone is not enough to ensure the usefulness of a scale, for even a perfectly unidimensional scale may have a resultant composite score that is determined primarily by measurement error (Gerbing and Anderson, 1988). Therefore, the reliability of each scale will be assessed after unidimensionality is established.

Reliability is an assessment of the degree of consistency between multiple measurements of a variable (Hair et al., 2010). It represents the degree to which measurements are free from error and yield consistent results across time periods. Cronbach's alpha is a widely used measure of such internal consistency (Cronbach, 1951; Nunnally, 1988). A scale is considered reliable if the alpha coefficient is

greater than 0.70.

The composite reliability proposed by Werts, Linn and Jöreskog (1974) and Jöreskog and Sörbom (1988) is another measure to assess construct reliability. It represents the proportion of measure variance attributable to the underlying trait. The Werts, Linn, and Jöreskog ρ_c represents the ratio of trait variance to the sum of trait and error variance. Scales with ρ_c greater than 70% are considered to be reliable (Nunnally and Bernstein, 1994). Both tests were used to assess the reliability of the scales for the current study.

After assessing Cronbach's alpha and composite reliability, all except five items, ITA_2, ITA_5, CNT_1, CNT_2 and IVM_4, surpassed the reliability minimum threshold. Thus ITA_2, ITA_5, CNT_1, CNT_2 and IVM_4 were removed. All of them had lower factor loadings and thus lowered the constructs' reliability with the empirical data. Then the model was respecified with these items deleted.

After respecification, the Cronbach's alphas of the seven constructs ranged from 0.789 to 0.934, and their composite reliabilities ranged from 72% to 91%. These values all meet the recommended minimum threshold, 0.7 and 70%, indicating sufficient construct reliability.

Table 6.9 summarises the values of these measures of the seven constructs in the research model. Table 6.10 summarises the number of retained indicators of

respective latent constructs.

Table 6.9 Measurement Model Reliability Analysis

Constructs	**Indicator Items**	**Factor Loading**	**Cronbach's Alpha á**	**Composite Reliability ρ_c**
ITA	ITA_1	.967	0.917	82.3
	ITA_3	.942		
	ITA_4	.857		
	ITA_6	.849		
CNT	CNT_3	.927	0.852	79.5
	CNT_4	.859		
	CNT_5	.848		
IVM	IVM_1	.883	0.803	73.9
	IVM_2	.839		
	IVM_3	.838		
EDP	EDP_1	.908	0.903	84.3
	EDP_2	.922		
	EDP_3	.918		
ESAT	$ESAT_1$	.92	0.789	72.0
	$ESAT_2$	.90		
	$ESAT_3$	.69		
SAT	SAT_1	.972	0.934	91.5
	SAT_2	.958		
	SAT_3	.938		
LOY	LOY_1	.882	0.802	72.2
	LOY_2	.848		
	LOY_3	.816		

Table 6.10 Number of Retained Indicators of Respective Constructs

Construct	**Number of Original Items**	**Number of Retained Items**
Interactivity	6	4
Control	5	3
Involvement	4	3
eService Dependency	3	3
eService Encounter Satisfaction	3	3
Overall Satisfaction	3	3
Loyalty	3	3
Total	**27**	**22**

Validity

Once unidimensionality and reliability are ensured, then validity has to be assessed. Construct validity means the extent to which a set of measured items actually reflects the latent construct those items are designed to measure, i.e., the path estimates linking constructs to indicator variables. Assessing the construct validity of a measurement model is the prime objective of SEM. To assess construct validity, convergent validity, discriminant validity and nomological validity were examined.

Convergent Validity

Table 6.11 shows that the unstandardised factor loading estimates are statistically significant for convergent validity.

Table 6.11 CFA Factor Loading Estimates and *t*-values

Indicators	Construct	Estimated Loading	Standard Error	*t*-value
ITA_1	ITA	1.00	NA	< 0.01
ITA_3		1.05	0.07	< 0.01
ITA_4		1.00	0.06	< 0.01
ITA_6		0.99	0.05	< 0.01
CNT_3	CNT	1.00	NA	< 0.01
CNT_4		0.84	0.08	< 0.01
CNT_5		1.35	0.13	< 0.01
IVM_1	IVM	1.00	NA	< 0.01
IVM_2		1.35	0.15	< 0.01
IVM_3		0.92	0.11	< 0.01
EDP_1	EDP	1.00	NA	< 0.01
EDP_2		1.07	0.06	< 0.01
EDP_3		0.93	0.05	< 0.01
$ESAT_1$	ESAT	1.00	NA	< 0.01
$ESAT_2$		0.87	0.06	< 0.01
$ESAT_3$		0.86	0.08	< 0.01
SAT_1	SAT	1.00	NA	< 0.01
SAT_2		0.74	0.03	< 0.01
SAT_3		0.80	0.03	< 0.01
LOY_1	LOY	1.00	NA	< 0.01
LOY_2		1.53	0.15	< 0.01
LOY_3		1.10	0.11	< 0.01

As unstandardised loadings in the table only offer information on directionality and statistical significance, standardised loadings had to be examined for discriminant validity and reliability estimates. For construct validity, individual standardised factor loadings should be at least .5 and preferably .7. Table 6.12 displays the standardised loadings.

Table 6.12 Standardised Factor Loadings

	ITA	**CNT**	**IVM**	**EDP**	**ESAT**	**SAT**	**LOY**
ITA_1	0.99						
ITA_3	0.89						
ITA_4	0.81						
ITA_6	0.81						
CNT_3		1.12					
CNT_4		0.68					
CNT_5		0.59					
IVM_1			0.98				
IVM_2			0.64				
IVM_3			0.64				
EDP_1				0.84			
EDP_2				0.86			
EDP_3				0.91			
$ESAT_1$					0.92		
$ESAT_2$					0.87		
$ESAT_3$					0.56		
SAT_1						0.99	
SAT_2						0.93	
SAT_3						0.88	
LOY_1							0.85
LOY_2							0.75
LOY_3							0.69

As shown in Table 6.12, the lowest loading obtained is .56, linking eService encounter satisfaction (ESAT) to item $ESAT_3$. Another loading is .59, linking control (CNT) to item CNT_5. However, they are still above the minimum threshold of .50. There are another four loading estimates that fall just below .70. Thus they do not have any harmful impact on the model fit or internal consistency.

Table 6.13 Average Variance Extracted and Reliability Estimates

	ITA	CNT	IVM	EDP	ESAT	SAT	LOY
Average Variance Extracted	82	79	73	84	72	91	72
Construct Reliability	0.92	0.85	0.80	0.90	0.79	0.93	0.80

The Average Variance Extracted (AVE) is computed by using the formula:

$$AVE_j = \frac{1}{p_j}\sum_{h=1}^{p_j} Cor^2(x_{jh}, \hat{\xi}_j)$$

The AVE is presented in Table 6.13. The AVE measures should equal or exceed 50%. The AVE estimates range from 72% for eService encounter satisfaction (ESAT) and for loyalty to the principal bank (LOY) to 91% for overall satisfaction with the principal bank (SAT). All exceed the 50% threshold.

Construct reliabilities range from .79 for the construct eService encounter satisfaction (ESAT) to .93 for the construct overall satisfaction with principal bank (SAT). They all exceed .70, suggesting adequate reliability.

By considering all these unstandardised and standardised loadings, average variance extracted and reliability estimates, the convergent validity of the measurement model is supported.

Discriminant Validity

Discriminant validity is the extent to which a construct is truly distinct from other constructs. High discriminant validity provides evidence that a construct is unique and captures phenomena that other constructs do not.

The interconstruct covariances were examined. After standardisation, the covariances are expressed as correlations. To establish discriminant validity, the Average Variance Extracted (AVE) was compared with the squared interconstruct correlations associated with each factor. All AVE estimates are greater than the corresponding interconstruct squared correlation estimates. It can be confirmed that there are no problems with discriminant validity for the eService model.

Nomological Validity

Constructs should also have nomological validity. The correlation matrix provides a useful start, as the constructs are expected to relate to one another. Correlations between the factor scores for each construct support the prediction that these constructs are positively related to one another.

Moreover, constructs used in the measurement model were measured by multi-item scales developed in previous research. Previous research suggests that favourable evaluations of all constructs are expected to produce positive relationship outcomes. In the current model, the constructs are expected to be positively related to whether eBanking customers are satisfied with the eBanking service encounter. Such a positive encounter experience is very likely to contribute to overall satisfaction with and loyalty to the bank as a whole. This relationship is also logical and sensible.

At this point, several statistical tests were used to assess the reliability and

validity of the indicators and constructs. Indicators without adequate reliability were removed. Thus all indicators and constructs are now appropriate for the measurement model. The theoretical model (Figure 6.3) is ready for the assessment of structural model fit.

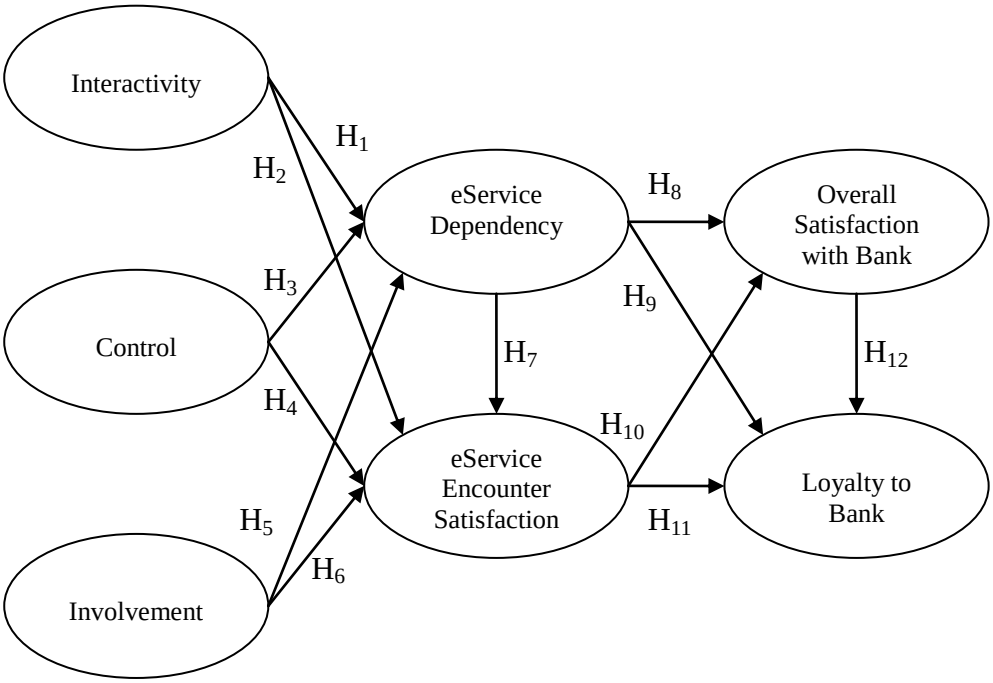


Figure 6.3 Theoretical Model of eService

Specifying the Structural Model

Once the measurement model is validated, the structural relationship among the constructs has to be established for SEM analysis. Thus, this stage involves specifying the structural model by assigning relationships between constructs based on the proposed theoretical model. Structural model specification focuses on the dependence relationship to represent the structural hypotheses of the hypothesised

model. Each hypothesis represents a specific relationship between two constructs.

The proposed eService Model was built based on relevant literature and research, including Flow Theory and Dependency Theory, and the eBankers' eBanking service development experience and eBanking customers' experience. As it is impossible to include all the constructs that might be related to eService satisfaction and overall satisfaction, the current research focuses on the seven constructs. In the eBanking service context, it is suspected that eBanking customers' perception of interactivity, control and involvement during the eBanking service encounter process affects their eBanking service dependency and eBanking service encounter satisfaction. Consequently, eBanking service dependency and eBanking service encounter satisfaction affect their overall satisfaction with the principal bank and loyalty to the principal bank. The structural relationships are presented as hypotheses and the path diagram respectively as follows.

Table 6.14 Hypotheses

Hypotheses	
H_1	Interactivity has a direct positive effect on eBanking service dependency.
H_2	Interactivity has a direct positive effect on the eBanking service encounter satisfaction.
H_3	Control has a direct positive effect on eBanking service dependency.
H_4	Control has a direct positive effect on eBanking service encounter satisfaction.
H_5	Involvement has a direct positive effect on eBanking service dependency.
H_6	Involvement has a direct positive effect on eBanking service encounter satisfaction.
H_7	eBanking service dependency has a direct positive effect on eBanking service encounter satisfaction.
H_8	eBanking service dependency has a direct positive effect on overall satisfaction with the principal bank.
H_9	eBanking service dependency has a direct positive effect on loyalty to the principal bank.
H_{10}	eBanking service encounter satisfaction has a direct positive effect on overall satisfaction with the principal bank.
H_{11}	eBanking service encounter satisfaction has a direct positive effect on loyalty to the principal bank.
H_{12}	Overall satisfaction to principal bank has a direct positive effect on loyalty to the principal bank.

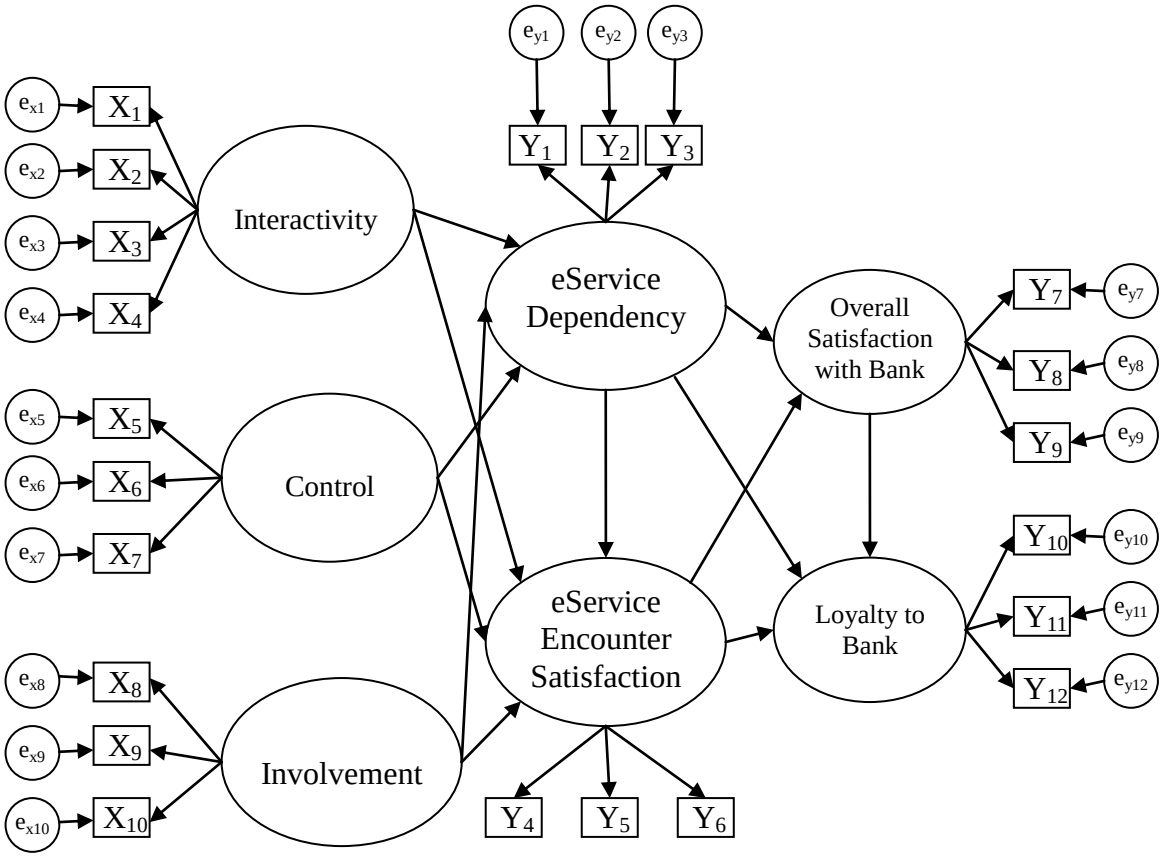


Figure 6.4 Path Diagram Showing Specified Hypothesised Structural Relationships and Measurement Specification

The model in Figure 6.4 is used for estimation, the test of the overall theory, including the measurement the relationships of indicators to respective constructs and the hypothesised structural relationships among constructs.

Assessing the Structural Model Validity

The final stage involves testing the validity of the structural model and its corresponding hypothesised theoretical relationships, i.e., H_1 to H_{12}. Validition is done by examining the structural model fit and examining model diagnostics. In

addition to the SEM model fit, the focus is on whether the structural relationships are consistent with the theoretical expectations.

Assessment of Model Fit

Assessing the overall goodness-of-fit for structural equation models is not as straightforward as with other multivariate dependence techniques, such as multiple regression, discriminant analysis and conjoint analysis. SEM has no single statistical test that best describes the "strength" of the model's predictions. Thus three types of goodness-of-fit measures are used in combination to assess the model fitness: absolute fit measures, incremental fit measures and parsimonious fit measures (Hair et al., 1998; Jöreskog & Sörbom, 1993; Kelloway, 1998). Absolute fit measures assess the overall model fit; incremental fit measures compare the proposed model to another model; and parsimonious fit measures compare models with different numbers of estimated coefficients (Hair et al., 1998).

Absolute Fit Measures

The absolute fit measures determine how well the overall model (structural and measurement models) predicts the observed covariance or correlation matrix (Hair et al., 1998). The measures assess the ability of the proposed model to reproduce the actual covariance matrix or how well it fits the data (Kelloway, 1998). Measures that can be used to evaluate the model are the likelihood-ratio chi-square

test (χ^2), and the root mean squared error of approximation (RMSEA).

Chi-square measures the discrepancy between the sample covariance or correlation matrix and the fitted covariance or correlation matrix (Jöreskog and Sörbom, 1993). Non-significant χ^2 implies that there is no discrepancy between the sample and fitted covariance, i.e., a good fit. RMSEA is based on the analysis of residuals. Values below 0.10 indicate a good fit with the data, and below 0.05 is considered a very good fit (Steiger, 1990).

Incremental Fit Measures

The incremental fit measures compare the proposed model with the baseline model, which is often referred to as the null model (Hair et al., 1998). These measures compare the competing models by which one provides the better fit to the data (Kelloway, 1998). Common incremental fit measures are the normed fit index (NFI), Tucker-Lewis index (NNFI), the relative fix index (RFI), the incremental fit index (IFI), and the comparative fit index (CFI).

Hair et al. (1998) provide a thorough discussion of these measures. The Tucker-Lewis index, also known as the nonnormed fit index (NNFI), combines a measure of parsimony with a comparative index. The NFI is a relative comparison of the proposed model to the null model. Values range from 0 (not fit at all) to 1.0 (perfect fit). For all these indices, values greater than or equal to 0.90 are indicative

of good fit. Finally, RFI, IFI and CFI represent comparisons between the estimated model and a null or independence model. As with NFI, their values lie between 0 and 1.0. For these indices, larger values indicate higher levels of goodness-of-fit.

Parsimonious Fit Measures

The parsimonious fit measures are used to compare models with different numbers of estimated coefficients. Some of the common measures are the normed chi-square, the parsimonious normed fit index (PNFI), and the parsimonious goodness-of-fit index (PCFI). These measures are discussed in Hair et al. (1998). The normed chi-square is the ratio of the chi-square divided by the degrees of freedom. Both PNFI and PGFI take account of the degrees of freedom in their calculation. They range from 0 to 1, and higher values indicate greater model parsimony.

Overall Goodness-of-Fit of the Structural Model

The information in Table 6.15 shows the overall fit statistics from testing the eService model.

Table 6.15 Goodness-of-Fit Measures of the Structural Model

Goodness of Fit Index	eService Model
Absolute Fit Measures	
χ^2 (Chi-square)	1202.82
Degrees of freedom	212
Probability	0.00
RMSEA (Root mean square error of approximation fit indicator)	0.14
Confidence interval for RMSEA (90%)	0.13–0.15
Incremental Fit Measures	
NFI (Normed fit index)	0.75
RFI (Relative fit index)	0.73
IFI (Incremental fit index)	0.78
NNFI (Non-normed fit index)	0.76
CFI (Comparative fit index)	0.78
Parsimony Fit Measures	
PRATIO (Parsimony ratio)	0.92
PNFI (Parsimony normed fit index)	0.69
PCFI (Parsimony confirmatory fit index)	0.72

By looking at the incremental fit measures and parsimony fit measures, these goodness-of-fit statistics suggest that the model does not provide a good fit with the data. NFI, RFI, IFI, NNFI and CFI are less than 0.90, below the recommended levels suggested by Hair et al. (1998).

Path Estimates

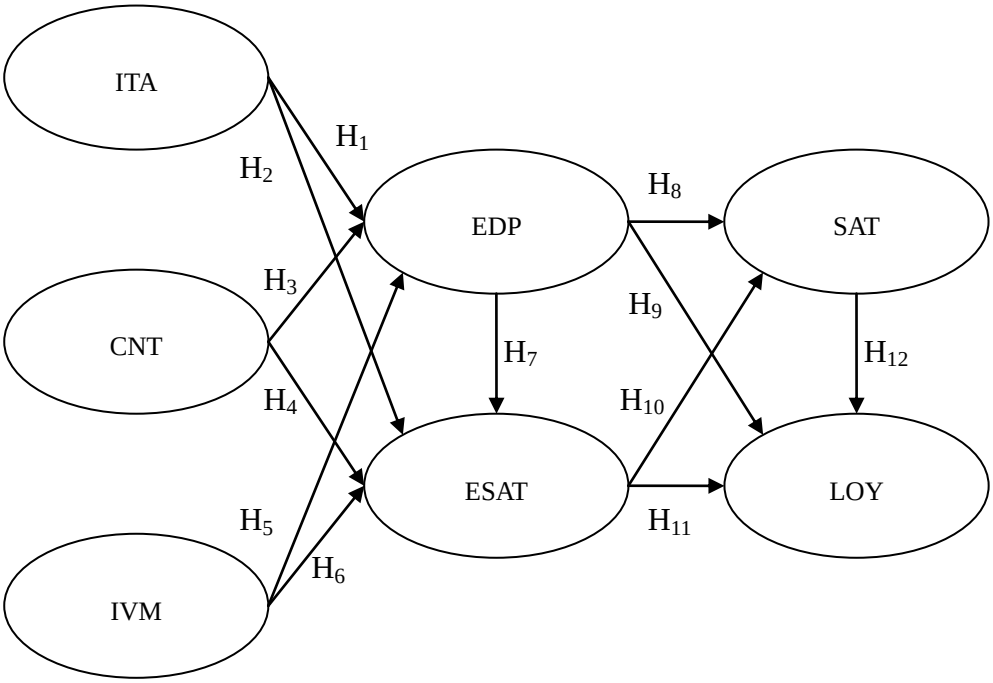
The path estimates of the structural model are shown in Table 6.16.

Table 6.16 Path Estimates of the Structural Model

Path	**Estimates**	**Standard Errors**	**Remark**
ITA + → EDP	0.21	0.05	*
ITA + → ESAT	0.15	0.05	**
CNT + → EDP	0.16	0.05	*
CNT + →ESAT	0.53	0.06	*
IVM + → EDP	0.51	0.07	*
IVM + →ESAT	0.58	0.08	*
EDP + →ESAT	0.06	0.07	
EDP + →SAT	0.49	0.06	*
EDP + →LOY	0.14	0.08	
ESAT + →SAT	0.26	0.06	*
ESAT + →LOY	0.03	0.07	
SAT + →LOY	0.46	0.08	*

Note: * significant at $p < 0.01$; ** significant at $p < 0.05$

Table 6.16 shows the structural path estimates. All except three structural path estimates are significant and in the expected direction. Overall, given that 9 out of 12 estimates are consistent with the hypotheses, these results support the theoretical model with a caveat for the three paths that are not supported.



Hypothesis	Parameter	Supported?
H_1 ITA + → EDP	$P_{EDP, ITA}$	Yes
H_2 ITA + → ESAT	$P_{ESAT, ITA}$	Yes
H_3 CNT + → EDP	$P_{EDP, CNT}$	Yes
H_4 CNT + →ESAT	$P_{ESAT, ITA}$	Yes
H_5 IVM + → EDP	$P_{EDP, IVM}$	Yes
H_6 IVM + →ESAT	$P_{ESAT, ITA}$	Yes
H_7 EDP + →ESAT	$P_{ESAT, EDP}$	No
H_8 EDP + →SAT	$P_{SAT, EDP}$	Yes
H_9 EDP + →LOY	$P_{LOY, EDP}$	No
H_{10} ESAT + →SAT	$P_{SAT, ESAT}$	Yes
H_{11} ESAT + →LOY	$P_{LOY, ESAT}$	No
H_{12} SAT + →LOY	$P_{LOY, SAT}$	Yes

Table 6.17 The Structural Model and Hypotheses

Three non-significant paths are identified. They are between eService dependency and eService encounter satisfaction (EDP → ESAT), between eService dependency and loyalty to the principal bank (EDP → LOY), and eService encounter

satisfaction and loyalty to the principal bank (ESAT → LOY).

However, deleting these non-significant paths from the model makes little significant change to the model fit. Thus modification indices were then examined to identify significant model modifications.

Model Modification

To improve the structural model fit, modification indices are calculated to identify for every possible parameter that is not estimated but may be included in a model (Mueller, 1996). Modification indices of approximately 4.0 or greater suggest that the fit could be improved significantly by freeing the corresponding path to be estimated. Incorporating these parameters in the model will lead to a drop in the overall χ^2, which implies the improvement of the model fit. However, making model changes based solely on modification indices is not recommended. Also, model modification should not be simply the result of searching for a relationship to improve the model fitness but should also be theoretically justified (Hair et al., 2010).

After reviewing and examining all the possible modification indices and relevant theoretical jusification, it was suggested freeing three paths. The first path is from interactivity to overall satisfaction with the principal bank (ITA → SAT). This implies that eBanking customers' overall satisfaction with the bank is directly

affected by interactivity.

The second path to be freed is from control to overall satisfaction with the principal bank (CNT → SAT). This implies that eBanking customers' overall satisfaction with the bank is directly affected by control.

The third is the path from involvement to overall satisfaction with the principal bank (IVM → SAT). This implies that eBanking customers' overall satisfaction with the bank is directly affected by involvement.

After these parameters were freed, the modified structural model was rerun. In order to illustrate the improvement of the goodness-of-fit of the modified model, Table 6.18 compares the goodness-of-fit indices of the original eService model and the modified model.

Table 6.18 Comparison of Goodness-of-fit Measures Between eService Model and Modified eService Model

Goodness of Fit Indices	**eService Model**	**Modified eService Model**
Absolute Fit Measures		
χ^2 (Chi-square)	1202.82	666.77
Degrees of freedom	212	199
Probability	0.00	0.00
RMSEA (Root mean square error of approximation fit indicator)	0.14	0.1
Confidence interval for RMSEA (90%)	0.13–0.15	0.09–0.11
Incremental Fit Measures		
NFI (Normed fit index)	0.75	0.86
RFI (Relative fit index)	0.73	0.84
IFI (Incremental fit index)	0.78	0.9
NNFI (Non-normed fit index)	0.76	0.88
CFI (Comparative fit index)	0.78	0.9
Parsimony Fit Measures		
PRATIO (Parsimony ratio)	0.92	0.86
PNFI (Parsimony normed fit index)	0.69	0.74
PCFI (Parsimony confirmatory fit index)	0.72	0.77

As illustrated in Table 6.18, the modified structural model shows an improvement of the overall model fit. The overall χ^2 drops from 1202.82 to 666.77. The change in χ^2 is significant at $p < 0.001$, which suggests that the fit of the modified model is significantly better than in the original model. Moreover, the NFI, RFI, IFI, NNFI, CFI and RMSEA values of the modified model show a better fit. Following the recommendation of Hair et al. (1998), IFI and CFI reach their recommended level, but NFI, RFI and NNFI are just below the recommended levels. It can be concluded that the modified eService model is a better fit than the original

model, and the modified model has achieved a reasonably good overall model fit.

Test of Rival Model

In addition to the conceptual model presented in Figure 6.3 and the modified model presented in Figure 6.6, a rival model is tested and compared with these models. Such a model comparison approach is considered as important in SEM. Kelloway (1998) emphasises that the focus of assessing model fit should almost invariably be on comparing the fit of competing and theoretically plausible models.

For the current conceptual model, it is a fully mediated model because the antecedents of eService dependency and eService encounter satisfaction are hypothesised to have only indirect effects (through eService dependency and eService encounter satisfaction respectively) on overall satisfaction and loyalty as the relationship outcomes. Given the mediating role of eService dependency and eService encounter satisfaction, a non-mediated model is used as the rival model. The rival model proposes different theoretical relationships between the exogenous constructs and endogenous constructs.

Direct Effects Model

The rival model hypothesises only direct effects of exogenous constructs on the endogenous construct i.e. relationship outcomes. Figure 6.5 is the rival model.

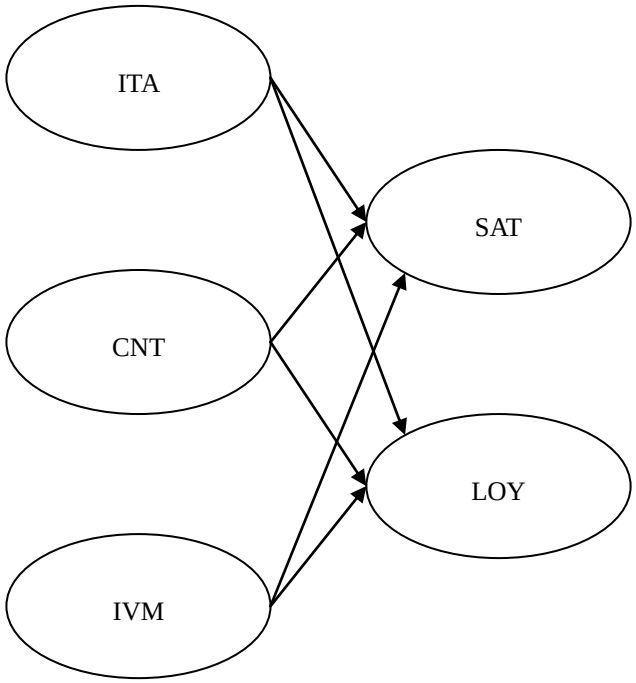


Figure 6.5 The Rival Model

The original eService model, modified eService model and rival model are then compared according to their absolute fitness, incremental fitness and parsimony fitness. Table 6.19 compares the goodness-of-fit measures between eService model, modified eService model and rival model.

Table 6.19 Comparison of Goodness-of-fit Measures Between eService Model, Modified eService Model and Rival Model

Goodness of Fit Indices	**Original eService Model**	**Modified eService Model**	**Rival Model**
Absolute Fit Measures			
χ^2 (Chi-square)	1202.82	666.77	1280
Degrees of freedom	212	199	230
Probability	0.00	0.00	0.00
RMSEA (Root mean square error of approximation fit indicator)	0.14	0.1	0.13
Confidence interval for RMSEA (90%)	0.13–0.15	0.09–0.11	0.12–0.15
Incremental Fit Measures			
NFI (Normed fit index)	0.75	0.86	0.71
RFI (Relative fit index)	0.73	0.84	0.70
IFI (Incremental fit index)	0.78	0.9	0.76
NNFI (Non-normed fit index)	0.76	0.88	0.71
CFI (Comparative fit index)	0.78	0.9	0.75
Parsimony Fit Measures			
PRATIO (Parsimony ratio)	0.92	0.86	0.90
PNFI (Parsimony normed fit index)	0.69	0.74	0.69
PCFI (Parsimony confirmatory fit index)	0.72	0.77	0.71

These results indicate a preference for the modified eService model over the original eService model and the rival models. The results suggest that in the comparison between the original eService model, the modified eService model and the rival model interpreting eService dependency and eService encounter satisfaction as mediating constructs of Internet communication (i.e. interactivity, control and involvement) and overall satisfaction-loyalty, the modified eService model is superior against the two other models.

Thus, it can be concluded that the rival model provides further support for the relationships between the exogenous constructs (i.e. interactivity, control and involvement), the mediating constructs (eService dependency and eService encounter satisfaction), and the endogenous constructs (overall satisfaction and loyalty).

The Final Model

Finally, in order to complete the validation of the model, the individual parameter estimates have been examined. Figure 6.6 shows the standardised structural path estimates of the modified model. All the estimates of the retained and newly added paths are significant and in the expected direction. A mediation analysis is also done for the final model (see Appendix E).

Table 6.20 Standardised Parameter Estimates of the Modified Model

Structural Relationship	**Modified eService Model Standardised Parameter Estimate**
H_1 ITA → EDP	0.19
H_2 ITA → ESAT	0.19
H_3 CNT → EDP	0.15
H_4 CNT →ESAT	0.50
H_5 IVM → EDP	0.40
H_6 IVM →ESAT	0.54
H_8 EDP →SAT	0.45
H_{10} ESAT →SAT	2.67
H_{12} SAT →LOY	0.46
ITA + →SAT	0.51
CNT + →SAT	1.12
IVM + →SAT	1.31

To conclude, given that 9 of 12 estimates are consistent with the hypotheses, the results support the theoretical model. Three paths are added, and they are confirmed to be significant and to contribute to the improvement of the overall model fit.

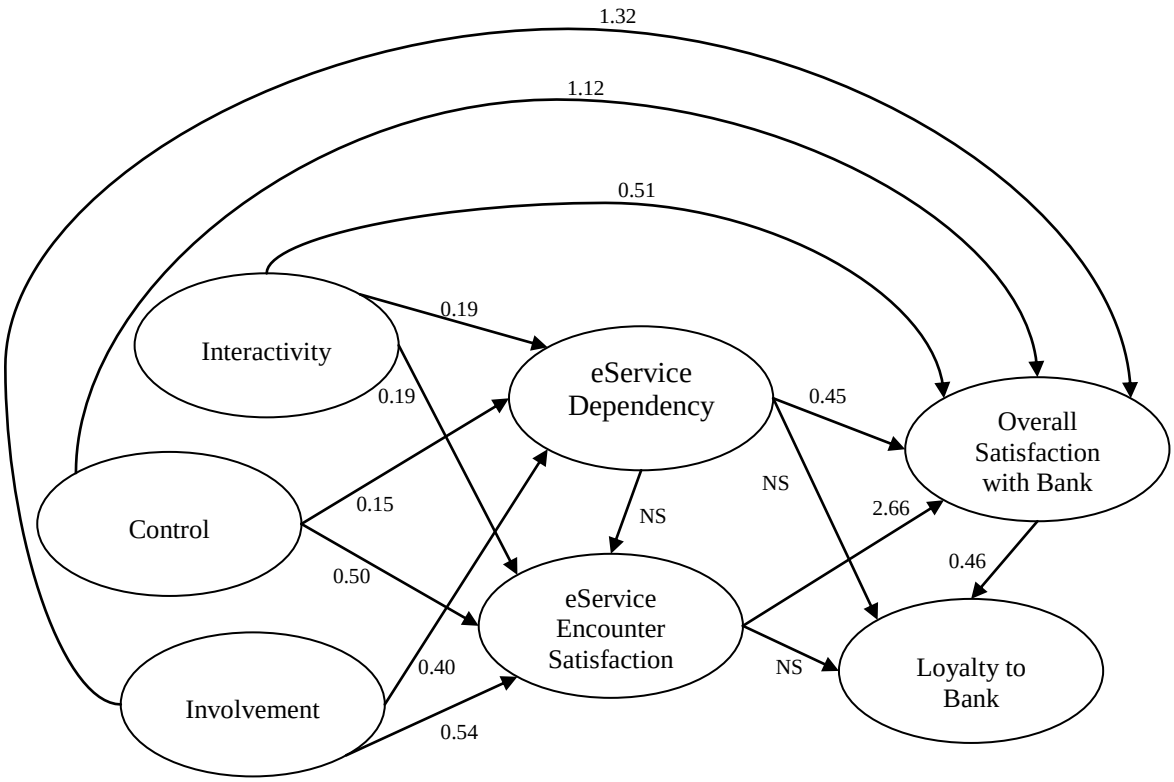


Figure 6.6. The Final Model (Standardised Path Estimates for the Modified eService Model)

Significance and Strengths of Individual Paths

The significance and relative strengths of individual links specified by the structural model have been completely evaluated. It is important to note that most hypothesised paths are found to be significant. Nine out of 12 paths are significant at

different significant levels.

The three exogenous constructs – interactivity, control and involvement – proposed in the research model are found to have positive, direct significant effects on the development of eService dependency, with standardised parameter estimates of 0.19, 0.15 and 0.4 respectively at 0.01 significance level. These show that H_1, H_3, and H_5 are supported.

Also, the three exogenous constructs — interactivity, control and involvement — were found to have positive, direct significant effects on the development of eService encounter satisfaction, and have standardised parameter estimates of 0.19, 0.5 and 0.54 respectively at 0.01 significance level. This means that H_2, H_4, and H_6 are supported.

More importantly, the analysis also shows that all three exogenous constructs have positive and direct significant effects on overall satisfaction, and have standardised parameter estimates of 0.51, 1.12 and 1.32 respectively at 0.01 significance level. These effects were not estimated in the original model.

eService dependency also has positive, direct and significant effects on overall satisfaction, and has the standardised parameter estimates of 0.45 at the 0.01 significance level. This indicates that H_8 is supported. However, different from what was expected, eService dependency's effect on eService encounter satisfaction and

on loyalty to bank is not statistically significant. Thus H_7 and H_9 are not supported.

It is also confirmed that eService encounter satisfaction has a positive, direct and significant effect on overall satisfaction, with a standardised parameter estimate of 2.66. It means that H_{10} is supported. However, it was found that eService encounter satisfaction does not have a significant effect on loyalty to the bank. Thus H_{11} is not supported.

The analysis result also shows that overall satisfaction with the principal bank has a positive, direct and significant effect on loyalty to the principal bank, having standardised parameter estimates of 0.46 at the 0.01 significance level. This means that H_{12} is supported

To summarise, the three Internet attributes of eService — interactivity, control and involvement — contribute both directly and indirectly to overall satisfaction with the bank. However, these three attributes do not contribute to loyalty to the bank. These three attributes also contribute directly to eService dependency and eService encounter satisfaction. Thus, it can be concluded that interactivity, control and involvement of eBanking customers while interacting with the eBanking system are all significant factors leading to their eService dependency, eService encounter satisfaction and overall satisfaction with the bank.

Discussion of Results

Analysis of the statistical results together with the research model yields meaningful and useful findings and implications. Although it is confirmed that interactivity, control and involvement of eBanking customers lead to eService dependency and eService encounter satisfaction, it is not expected that these three attributes would also contribute directly to overall satisfaction with the bank.

This section discusses the results and findings developed from the structural equation modelling by examining the effects of the three exogenous constructs, with reference to the following standardised total effects data. The total effect of one factor on another was obtained by adding its direct and indirect effects via relevant intervening factors.

Table 6.21 Standardised Total Effects

	ITA	**CNT**	**IVM**	**EDP**	**ESAT**	**SAT**	**LOY**
EDP	0.19	0.15	0.40	0	0	0	0
ESAT	0.19	0.50	0.54	0	0	0	0
SAT	1.10	2.39	2.93	0.45	2.67	0	0
LOY	0.04	0.07	0.14	0.21	1.22	0.46	0

Effect of Interactivity

Interactivity is considered an important condition for successful human-computer interaction. In the current research, it was found that interactivity

has both direct and indirect effects (via eService dependency and eService encounter satisfaction) on overall satisfaction with the bank. It implies that eService providers have to offer an interactive communication environment in order to enhance customer satisfaction.

It was actually unexpected that interactivity would directly influence overall satisfaction. But it is reasonable to believe that, once eBanking customers perceive that the eBanking service offers personalised and responsive service, their overall satisfaction with the principal bank will also be enhanced.

Interactivity also exhibits an indirect effect on overall satisfaction, via eService dependency and eService encounter satisfaction. It was confirmed that interactivity leads to the dependency of customers on eBanking service. Such confirmation supports the view that interactivity is a factor that enhances the dependency of customers on using eBanking services.

It was also confirmed that interactivity leads to eService encounter satisfaction, which contributes to the overall satisfaction with the bank. Interactivity is an essential element in the encounter process between customers and eService provider. Once a personalised and responsive encounter between customers and eService provider is achieved, a positive experience, i.e., eService encounter satisfaction, will be developed in the minds of eBanking customers.

Consequently, customers' eService dependency and eService encounter satisfaction contribute to overall satisfaction with the bank.

Effect of Control

In an Internet customer-corporate communication environment or eService environment, customers now play the dominant role in the interaction process, as they are very skillful in using the eService. In the current research, it was found that control has both direct and indirect effects (via eService dependency and eService encounter satisfaction) on overall satisfaction with the bank. This implies that control is required by eBanking customers in an eService context in order to achieve a satisfactory outcome.

It was also unexpected that control would directly influence overall satisfaction. But it is logical to believe that, once eBanking customers perceive that they can control the interaction and transaction while encountering the eBanking site, their overall satisfaction with the principal bank will also be enhanced.

Control also exhibits an indirect effect on overall satisfaction, via eService dependency and eService encounter satisfaction. It was confirmed that control leads to the dependency of customers on eBanking service. Such confirmation supports the view that control is a factor that enhances the dependency of customers on using eBanking service. In fact, compared with other encounter and transaction options, it

is the eBanking option that customers have the most control over in the encountering process. Once eBanking customers get used to this eBanking option, their dependency on such an option will increase.

It was also confirmed that control leads to eService encounter satisfaction, which contributes to overall satisfaction with the bank. Control is an essential element in the encounter process between customers and the eService provider. If customers are able to or can skillfully manage the encounter process, a positive experience, i.e., eService encounter satisfaction, will be developed in the minds of eBanking customers.

Effect of Involvement

In the eBanking context, customers face a relatively high degree of financial risk and financial interest; thus, they concentrate during the encounter process to minimise their risk and to maximise their interest. In the current research, it was found that involvement has both direct and indirect effects (via eService dependency and eService encounter satisfaction) on overall satisfaction with the bank.

It was also unexpected that involvement would directly influence overall satisfaction in an eBanking context, and involvement would represent concentration on navigation in the website. Thus it is logical to believe that, once eBanking customers have a high degree of involvement during the interaction process with the

eBanking site, their overall satisfaction with the principal bank will also be enhanced.

Involvement also exhibits an indirect effect on overall satisfaction, via eService dependency and eService encounter satisfaction. It was confirmed that involvement leads to the dependency of customers on eBanking service. Such confirmation supports the view that involvement is a factor that enhances the dependency of customers on using eBanking service. In fact, it is the eBanking option that customers have to get highly involved in during the interaction process for navigation and self-service purposes.

It was also confirmed that involvement leads to eService encounter satisfaction, which contributes to overall satisfaction with the bank. Involvement is an essential element in the eBanking environment, as customers have to navigate purposefully. If they are able to concentrate on free navigation, a positive experience, i.e., eService encounter satisfaction, will be developed in the minds of eBanking customers.

Relative Importance of Effects

Interactivity, control and involvement are all significant factors affecting eService dependency, eService encounter satisfaction and overall satisfaction with the bank. By comparing their total effects on the endogenous variables, it was found

that involvement is the most significant of the three exogenous variables, and the standardised total effects are 0.4, 0.54 and 2.93 respectively. Control is the second one, and standardised total effects are 0.15, 0.5 and 2.39 respectively. The standardised total effects of interactivity are 0.19, 0.19 and 1.1 respectively. Such relative differences in total effects have both theoretical and managerial implications.

Conclusion

This chapter presents the results of data analysis. SEM using LISREL was employed to test the proposed research model. The results of the structural path analysis of the research model provide support to 9 out of 12 hypotheses. It was found that all three exogenous constructs — interactivity, control and involvement — influence eService dependency, eService encounter satisfaction and overall satisfaction positively.

In the next chapter, the theoretical and managerial implications of the model and findings are discussed. The limitations of the research and its implications for further research are also covered.

CHAPTER 7

CONCLUSION AND IMPLICATIONS

This final chapter gives a summary of the current research and makes recommendations for future research. The chapter begins with a reiteration of the aim and objectives. The findings with interpretations are then outlined. The theoretical contributions and managerial implications are discussed in detail. Finally, the limitations of the current research and suggestions for future research are presented.

Aim and Objectives of the Research

The current research primarily aims to find out how Internet communication attributes in the eService context influence eService encounter satisfaction (i.e. service encounter level), and overall satisfaction and loyalty (i.e. corporate level) by using Flow Theory as the theoretical foundation. To realise the aim, the following research objectives are formulated:

- To identify the Internet communication attributes in the context of eService from customers' perspectives
- To theorise the relationship between the identified attributes and customer satisfaction with and loyalty to eBanking service and the associated service providers
- To formulate an eService model for eBanking.

The eService Model

It is confirmed that the above objectives of the research are met. An eService Model is formulated to theorise the relationship between Internet communication attributes and customer relationship outcome in the eService context. It highlights the contribution of effective customer-corporate interaction to customer satisfaction.

In the eService Model, the key variables of interest are interactivity, control and involvement, derived from the Flow Theory and various theories of consumer psychology and behaviour. These three variables characterize eBanking customers' perceptions of the interaction with service providers by using eBanking service via the Internet. They demonstrate a positive effect on eService dependency and eService encounter satisfaction at service encounter level. The accumulation of the positive experience of eService dependency and eService encounter satisfaction contribute directly to overall satisfaction and indirectly to loyalty to the service provider at corporate level.

The validated structural model confirms the significance of interactivity, control and involvement. The structural model shows that interactivity, control and involvement contribute positively to eService dependency and eService encounter satisfaction, which in turn contribute positively to overall satisfaction with the principal bank. Also, overall satisfaction with the principal bank contributes

positively to loyalty to the principal bank. However, the effect of eService dependency and eService encounter satisfaction on loyalty to the principal bank is not significant. The effect of eService dependency on eService encounter satisfaction is not significant either.

The validated eService Model in the current research enriches the existing literature of eService, eBanking, online consumer behaviour, online communication, customer satisfaction and loyalty and relationship marketing by exploring the impact of certain Internet communication attributes on customer relationships. It also helps to identify and explore a new concept in eService, i.e., eService dependency, which is an important but neglected construct in eService. In line with Cheung et al. (2003), Hoffman et al. (1996), Koufaris (2002), and Shankar et al. (2003), the eService model also successfully extends the application of Flow Theory in the new area of eService. It also helps to operationalise the flow concepts with validated latent variables in the eService context.

The eService Model supports and illustrates the achievement of the aim and objectives, and the contributions of the current research. The following sections summarises the findings.

Summary of Findings

There are two major sets of findings in the current research. The first set of findings is qualitative in nature while the second set is quantitative.

Major Findings from the Qualitative Study

A qualitative study of eBanking service in the form of expert interview with eBankers and focus group study with eBanking customers was conducted. It achieves the research objectives of identifying the Internet communication concepts and their attributes, and identifying their relationships with certain relationship outcomes at service encounter level and at corporate level.

By quoting the examples of online bill payment, online purchase of travel insurance and eTrading of shares, eBankers believe that eBanking services are well received by Hong Kong customers and they contribute to service encounter satisfaction. In addition to eService encounter satisfaction, eService dependency is also found to be the potential relationship outcome of Internet communication.

Customer satisfaction and loyalty at corporate level are the other aspects being investigated. As eBanking is one of the latest service options, eBankers believe that encounter satisfaction with eBanking contributes to overall satisfaction and loyalty to the bank as a whole i.e. overall satisfaction and loyalty at corporate level. However, it is suspected that eBanking might also be a threat to loyalty.

eBankers also support that eService dependency might contribute to overall satisfaction and loyalty at corporate level.

The expert interview also explores the potential factors leading to the acceptance of eBanking services, eService encounter satisfaction and eService dependency by customers. It is found that there are push factors (i.e. the environmental factors and the marketing factors) as well as pull factors (i.e. the customers' behavioural and psychological factors) for the above outcomes. The Internet communication attributes of high degree of interactivity with customers, deep involvement and skilful control by eBanking customers are considered as the major potential factors leading to eService encounter satisfaction and eService dependency. In eBanking customers' words, they would like to be deeply involved in and actively control the interaction process in a highly interactive manner with their bank via the eBanking platform in order to be dependent on and satisfied with eService. Their dependency on eService and their encounter satisfaction might lead to overall satisfaction with and loyalty to the principal bank.

While the expert interview identifies the Internet communication attributes and their possible relationship outcomes at both service encounter level and corporate level, the focus group study identifies the attributes of the respective concepts, and helps to define and operationalise these concepts. Although

interactivity, control and involvement are well-researched constructs in their respective disciplines, it is confirmed that they have different attributes and definitions in the current research to reflect their specialities in eService research.

To sum up, the qualitative part of the data collection, by using Flow Theory and the Technology Acceptance Model as the theoretical foundation, together with eBankers' and eBanking customers' "insider" views, interactivity, control and involvement were identified as the exogenous constructs influencing eService dependency, eService encounter satisfaction, overall satisfaction and loyalty.

Major Findings from the Quantitative Study

Based on the findings from the qualitative study, together with the support of relevant literature, a research model is proposed for quantitative testing. It achieves the objectives to formulate an eService Model for eBanking and to theorise the relationship between the Internet communication constructs, customer satisfaction with and loyalty to eBanking service (i.e. at service encounter level) and to the associated service providers (i.e. at corporate level) in the eService context.

SEM was used to test the validity of the model. In order to conduct the analysis process systematically, the six stages in SEM proposed by Hair et al. (2010) are followed. A full covariance structural model is typically composed of two parts: the measurement model and the structural model.

The Measurement Model and its Validity

The measurement model describes how each latent variable is measured or operationalised by corresponding manifest indicators. It also provides information regarding the validity and reliability of the observed indicators. The structural model describes the relationships between the latent variables themselves and indicates the amount of unexplained variance.

To assess the measurement model validity, the criteria for construct reliability and construct validity are examined. After assessing Cronbach's alpha and composite reliability, all except five items surpassed the reliability minimum threshold. These five items were deleted and the model was respecified. After respecification, the Cronbach's alphas of the seven constructs ranged from 0.789 to 0.934, and their composite reliabilities ranged from 72% to 91%. These values all meet the recommended minimum threshold, 0.7 and 70%, indicating sufficient construct reliability. For construct validity, evidence of construct validity was present in terms of convergent validity, discriminant validity and nomological validity by looking at the unstandardised and standardised factor loadings, average variance extracted, reliability estimates, and correlation matrix respectively.

To summarise, the CFA results generally support the measurement model. It is fairly confident that the measures behave as they should in terms of the

unidimensionality of the measures and in the way the constructs relate to other measures.

The Structural Model and its Validity

To test the validity of the structural model, three types of goodness-of-fit measures are used: absolute fit measures, incremental fit measures and parsimonious fit measures. However, these goodness-of-fit statistics suggest that the model does not provide a good fit with the data. NFI, RFI, IFI, NNFI and CFI are less than 0.90, below the recommended levels suggested by Hair et al. (1998).

Model modification. Modification indices are calculated to identify possible parameters to improve the structural model fit. Consequently, three paths are freed: interactivity to overall satisfaction with the principal bank (ITA → SAT), control to overall satisfaction with the principal bank (CNT → SAT), and involvement to overall satisfaction with the principal bank (IVM → SAT).

The modified structural model achieves a reasonably good overall model fit. The overall Chi-square (χ^2) drops from 1202.82 to 666.77. The change in χ^2 is significant at $p < 0.001$, which suggests that the fit of the modified model is significantly better than in the original model. The NFI, RFI, IFI, NNFI, CFI and RMSEA values of the modified model also show a better fit. To conclude, given that 9 of 12 estimates are consistent with the hypotheses, the results support the

theoretical model. Three paths are added, and they are confirmed to be significant and to contribute to the improvement of the overall model fit.

Summary of hypotheses testing. The structural model is specified by assigning relationships between constructs based on the proposed theoretical model. The structural relationships are presented as hypotheses.

Most of the hypotheses in the current research (nine out of twelve hypotheses, H_1 to H_6, H_8, H_{10} and H_{12}) are supported. These results support the theoretical model with a caveat for the three paths that are not supported. Hypotheses and results are summarised in Table 7.1.

Hypothesis	**Parameter**	**Supported?**
H_1 ITA + → EDP	$P_{EDP, ITA}$	Yes
H_2 ITA + → ESAT	$P_{ESAT, ITA}$	Yes
H_3 CNT + → EDP	$P_{EDP, CNT}$	Yes
H_4 CNT + →ESAT	$P_{ESAT, ITA}$	Yes
H_5 IVM + → EDP	$P_{EDP, IVM}$	Yes
H_6 IVM + →ESAT	$P_{ESAT, ITA}$	Yes
H_7 EDP + →ESAT	$P_{ESAT, EDP}$	No
H_8 EDP + →SAT	$P_{SAT, EDP}$	Yes
H_9 EDP + →LOY	$P_{LOY, EDP}$	No
H_{10} ESAT + →SAT	$P_{SAT, ESAT}$	Yes
H_{11} ESAT + →LOY	$P_{LOY, ESAT}$	No
H_{12} SAT + →LOY	$P_{LOY, SAT}$	Yes

Table 7.1 Summary of the Hypotheses and Results

Interactivity, control, involvement and eService dependency. All the exogenous constructs, interactivity, control and involvement, are confirmed to have positive influence on eService dependency at service encounter level (i.e. H_1, H_3 and H_5). These findings are in line with previous research on media and Internet dependency, such as Ball-Rokeach (1998), Ball-Rokeach and DeFleur (1976), Ball-Rokeach et al. (1984), Grant et al. (1991), Rubin and Windhal (1982, 1986), and Sun et al. (2008). They provide the theoretical ground for the hypotheses of the current research. As H_1, H_3 and H_5 are all supported, the current research extends the concept of dependency to eService and eService encounter satisfaction. It also confirms the positive influence of customer-service provider Internet interaction on eService dependency.

Interactivity, control, involvement and eService encounter satisfaction. All the exogenous constructs, interactivity, control and involvement, are confirmed to have positive influence on eService encounter satisfaction (i.e. H_2, H_4 and H_6). These findings are in line with previous research on service encounter satisfaction in online or offline environments, such as Baronas and Louis (1988), Bitner and Hubbert (1994), Ding et al. (2007), Ennew and Binks (1999), Fyall et al. (2003), Jones and Suh (2000), Klein (2001), Robb et al. (1997). They provide the theoretical ground for the hypotheses of the current research. As H_2, H_4 and H_6 are all supported, the current

research further confirms the positive influence of customer-service provider Internet interaction on eService encounter satisfaction.

Interactivity, control, involvement and overall satisfaction. In the modified model, the three exogenous constructs also influence directly and positively the overall satisfaction with the bank. These significant relationships reflect that customers' active control, involvement and interactive communication are critically important to achieve an overall satisfaction at corporate level, both directly and indirectly via eService dependency and eService encounter satisfaction.

eService dependency, eService encounter satisfaction and overall satisfaction. The two intermediating constructs – eService dependency and eService encounter satisfaction – were confirmed to have a positive influence on the endogenous construct, overall satisfaction with the bank (i.e. H_8 and H_{10}).

Haytko and Simmers (2009) find the positive impact of dependency and encounter satisfaction of online interactions on overall satisfaction. Online bill payment illustrates the effect of eService dependency on overall satisfaction with the principal bank (Beer, 2006; Johnson, 2008).

In both the traditional marketing and online marketing contexts, numerous studies, including Bitner and Hubbert (1994), Oliver (1997), Rust and Oliver (1994), Jones and Suh (2000), and Shankar et al. (2003), have already confirmed the positive

relationship between service encounter satisfaction and overall satisfaction.

From the practitioners' perspective, eBankers (eB2 and eB3) also support the positive influence of dependency and encounter satisfaction on overall satisfaction.

As H_8 is supported, the current research validates the relationship between eService dependency and overall satisfaction. It extends the application of eService dependency to explain overall satisfaction and enriches the eService literature with a new concept. As H_{10} is supported, the current research further confirms the service encounter satisfaction and overall satisfaction relationship. It also extends this relationship to the eService context.

Overall satisfaction and loyalty. The two endogenous constructs also have a positive relationship – overall satisfaction with the bank has a positive influence on loyalty to the bank (i.e. H_{12}). Their positive relationship has been thoroughly studied and confirmed in both the traditional context and the online contexts (e.g., Bolton, 1998; Reicheld, 1996; Gronholdt et al., 2000; Park and Kim, 2003; van Riel et al., 2001; Yang and Peterson, 2004). Their positive relationship further consolidates the satisfaction-loyalty paradigm, extends their application in the eService context and enriches the eService literature.

eService dependency, eService encounter satisfaction and loyalty. Three of the hypotheses ($H_{7,}$ H_9 and H_{11}) are supported. The three non-significant paths are: eService dependency and eService encounter satisfaction path (EDP → ESAT), eService dependency and loyalty to the principal bank path (EDP → LOY), and eService encounter satisfaction and loyalty to the principal bank path (ESAT → LOY). It is evident that these three non-significant paths are only related to the three constructs – eService dependency, eService encounter satisfaction and loyalty to the principal bank.

For the non-significant path of eService dependency and eService encounter satisfaction (EDP → ESAT), it is not surprising and it is actually similar with the findings by Shankar et al. (2003) regarding the impact of online medium on service encounter satisfaction. The non-significant relationship can be explained by the habitual and unconscious nature of dependency (Wang et al., 2005; Bargh and Chartrand, 1999; Bargh et al., 2001; Dijksterhuis et al., 2005; Wood et al., 2002). As eBanking customers are experienced Internet and eService users, they already used to using eBanking service habitually. They only depend on eBanking to complete their transactions for achievement of financial goals. Such habitual behaviour can be mechanical with limited cognitive considerations for each individual interaction or transaction. Such habitual dependency fulfils the customers' functional needs but

might not contribute to eService encounter satisfaction. It might even be argued that it might lead to encounter dissatisfaction if the eBanking functions cannot be performed or tasks cannot be completed.

The other two non-significant paths – eService dependency and loyalty to the principal bank (EDP → LOY) and eService encounter satisfaction and loyalty to the principal bank path (ESAT → LOY) – indicate that eService constructs (EDP and ESAT) do not have a signifcant relationship with the loyalty construct i.e., loyalty to the service provider at corporate level. In the study of customer loyalty in social virtual worlds, Mäntymäki (2009) has a similar result that online satisfaction does not have a significant impact on loyalty.

This situation highlights the potential problem of transferability of customer relationships (Beatty, Mayer, Coleman, Reynolds and Lee, 1996; Reynolds and Beatty, 1999a, 1999b) of different structural levels (Iacobucci and Ostrom, 1996).

For the current research, the non-significant paths of ESAT → LOY and EDP → LOY indicate that the positive relationships at individual-to-system structural level might not be transferable directly to individual-to-company structural level. In other words, eService encounter satisfaction of customers towards eBanking (individual-to-system structural level) might not be transferable to become loyalty of customers towards the bank (individual-to-company structural level). Such

non-transferability might also be due to the differential nature of eService.

These results are also in line with the expert opinion of the eBankers (eB1, eB3 and eB4). They share the opinion that eBanking might not help with building loyalty, because of eBanking services' transactional, transparent, remotely accessible and impersonal nature. All these natures have a negative impact on the long-term relationship between customers and service provider. Following their thoughts, dependency and satisfaction at service encounter level in the Internet context might not be able to contribute directly to loyalty at corporate level.

Relative importance of effects. Although it was confirmed that interactivity, control and involvement are all significant factors contributing to eService dependency and satisfaction, it is important to identify their relative importance. By comparing their standardised total effects (Table 6.13), it was revealed that involvement is the most important construct contributing to the three significant outcomes, eService dependency, eService encounter satisfaction and overall satisfaction. Control ranks second and interactivity ranks third in examining their contribution to the three outcomes.

This section provides a summary of the findings from both the qualitative and quantitative studies. It also provides an explanation for all hypotheses, no matter whether they are supported or not supported, from a theoretical perspective and

managerial perspective. A modified model with better structural fit is also discussed. The following section discusses the contributions as well as the implications of the research.

Contributions and Implications

In this section, the contributions and implications, from both a theoretical and a managerial aspect are discussed.

Theoretical Contributions

The theoretical contributions of the current research have three levels: the proposal, modification and development of research constructs, the model development and validation, and the building up of eService theory and knowledge.

Proposal, Modification and Development of Research Constructs and their Measurements

One important contribution of the current study is the proposal, development and modification of constructs for eService research. Most of the research constructs, such as involvement and control, already exist and are well developed in traditional marketing research. Constructs are then modified in order to reflect the particularity of the specific research context of eService. Thus based on existing literature and the findings from the qualitative study, all the existing constructs are re-defined and Internet communication indicators are incorporated.

New research construct is also proposed and developed by the current research. With reference to previous research on Internet dependency and media dependency (Ball-Rokeach, 1998; Ball-Rokeach and DeFleur, 1976; Ball-Rokeach et al., 1984; Cleary, 1999; Grant et al., 1991; Hirschburg et al., 1986; Rubin and Windhal, 1982, 1986; Sun et al., 2008) and eBanking customers' qualitative opinion, the construct, eService dependency and its indicators are developed. Its relationship with all the exogenous constructs in the model is validated. Its relationship with one of the endogenous constructs, overall satisfaction, is also validated. The current research extends the concept of dependency to a new marketing research area. It also enriches the eService literature and inspires further research on this construct and its measurements.

In short, the current research contributes to develop constructs to describe, conceptualise and analyse eService from the Internet communication perspective.

Model Development and Validation

The current research contributes to the development of an eService model. By building upon various descriptions of Flow Theory, TAM, media dependency and customer satisfaction-loyalty, an eService conceptual model is developed to hypothesise the structural relationships between Internet communication constructs and satisfaction-loyalty constructs. Its structural fitness and validated hypotheses

evidence the validity of the eService model.

Thus the current research develops, tests and validates an eService model. The eService model theorises the building of customer satisfaction by effective Internet communication. It also supports the research proposition to develop a communication-based marketing model proposed by Duncan and Moriarty (1998).

The eService model enriches the understanding of the Internet communication constructs and their significance in customer behaviour and attitude at both service encounter level and corporate level. It thus makes a contribution to research in marketing, eService management and customer-corporate Internet communication.

The Building up of eService Theory and Knowledge

The current research also contributes to the building up of eService theory in particular, and building up eService knowledge in general.

Currently, the mainstream current eService research looks at satisfaction towards eService from the information system perspective. Cheung et al. (2003) comment that researchers depend too much on the family of the Theory of Reasoned Action and neglect other theories such as Flow Theory. Duncan and Moriarty (1998) point out that interactive communication is the foundation of customer-focused marketing leading to better customer relationships. It is clear that there is a lack of

research studying the communication attributes and psychological attributes of the Internet and how these attributes contribute to positive relationship outcomes. Thus the current research enriches the eService knowledge by looking at eService from an Internet communication perspective. By filling the research gap regarding how Internet communication attributes in the eService context influence eService encounter satisfaction (i.e. the service encounter level), and overall satisfaction and loyalty (i.e. the corporate level), it extends the horizon of eService research from IS to a more diversified spectrum and brings in new insights. Thus it advances eService theory by incorporating different constructs to explain the phenomenon and by achieving a significant result of eService model development. It becomes a very good reference for other eService research. In general, it contributes to the building up of eService knowledge with a strong orientation of Internet communication.

Extending the discussion of the theoretical contributions above, the following sections discuss the implications of the research from theoretical and managerial perspectives respectively.

Theoretical Implications

Based on the discussion of theoretical contributions in the previous section, two theoretical implications can be drawn – a multidisciplinary approach for eService theory development and an exploratory approach to identify new constructs.

eService is a new format of service. It is also a new area that attracts the attention of research. However, the study of eService requires a multidisciplinary approach. By its name, eService implies its diversified nature related to CMC, IS and service (Rowley, 2006; Rust and Lemon, 2001; Boyer, Hollowell and Rotha, 2002). The current research exploits different streams of literature, including CMC, consumer behaviour, customer satisfaction and loyalty, Flow Theory, Internet communication, and media and Internet dependency. A conceptual framework is then formulated based on these references, and validated. It implies that a multidisciplinary approach has to be adopted in order to successfully develop a model in the new research area of eService and Internet communication.

In the research into new formats of service on the Internet, traditional or existing constructs and indicators might not be applicable, although they are the important references. For the current research, traditional constructs are modified (such as control and involvement), and new construct (i.e. eService dependency) are developed by using an exploratory qualitative approach. These constructs are used to formulate the conceptual model and finally proved to be structurally fit by using SEM. This process then implies that new constructs are important for the explanation of new phenomena. An exploratory research approach might be adopted in order to find specific constructs and indicators to represent the new phenomena in the new

marketspace.

Managerial Implications

In addition to the theoretical contributions and implications discussed above, the current research also provides new insights for eService and eBanking practitioners for their effective management. This section discusses the implications of interactivity, control and involvement in eService from a managerial perspective. Practical suggestions to improve interactivity, control and involvement are made.

In the eBanking service context, the research reveals the positive effects and benefits of interactivity, control and involvement on eService dependency, eService encounter satisfaction at service encounter level, and overall satisfaction with and loyalty to the principal bank at corporate level. By understanding these effects, the principal banks offering eBanking service can choose appropriate eService strategies and Internet communication strategies to facilitate their service for and communication with customers.

The research results suggest that the eService provider should incorporate interactivity, customer control and customer involvement in their eService in order to develop customers' eService dependency on, encounter satisfaction with, and overall satisfaction with the service provider. Interactivity, control and involvement will benefit the bank at both service encounter level and corporate level.

Involvement

As involvement is the most important construct contributing to the dependency and satisfaction of customers, eService executives might adopt a focusing strategy, especially under conditions of resource constraints, to cultivate customer involvement in the eService interaction process.

eBank-generated Content

Involvement can be enhanced by offering a free navigation eService environment with useful content and activities to keep customers concentrated. For eBanking sites, most of the customers visit the site purposefully. Useful content and activities must be those issues related to personal finance, investment and wealth management. The content should be reader-friendly: easy to read, easy to understand, easy to execute and easy to create wealth.

Free navigation implies rich content with free and easy access. Traditionally, banks only offer limited content with restricted access to selected target customers. However, eBankers should be aware of the transparent nature of the Internet and appreciate the free flow of information on it. Smart customers will get what they aim to get from the Internet. Thus, eBankers should be the first movers to offer rich content with free access to their customers in order to keep them involved in their eBanking site. Consequently, customers will be dependent on the eService and be

satisfied with the eService encounter.

User-generated Content

In addition to eBank-generated content, user-generated content will also enhance their involvement. It incorporates customer-generated information, feedback or comments. For example, a customer opinion platform can be developed in the eBanking site to enable customers to share their information and opinions with other customers. eBankers should facilitate customers in uploading and distributing content onto the platform. They should also monitor the content constantly as it is the important sources of electronic word-of-mouth which might influence current and prospective customers.

Control

Control is also a construct that contributes positively to dependency and satisfaction, although it is second to involvement in the model. It is apparent that, from the findings of the qualitative study, both eBanking customers themselves and eBankers believe and accept that customers have become more powerful in the Internet marketspace. In the current research, this is reflected as customers' control in the interaction process.

User-friendly Interface to Facilitate Customer Control

It is the nature of the Internet and the nature of eService that allows customers/users to be active and to control the interaction process. eService providers are now playing a passive role in serving customers and meeting their requirements. In such a scenario, the strategy of eBanking should be the development of a more user-friendly but advanced interface to match their highly skilful customers. As eBanking customers are already very skilful nowadays, they expect a more user-friendly and comprehensive functionality interface for them to manage the banking process and then to complete their banking tasks.

Cooperation between eService Providers

It is also expected that customers' banking tasks will get more complicated as banks are moving towards self-service and global eBanking. The prevalence of electronic money in the near future will further support the diffusion of eBanking service. It is then suggested that eBankers should co-operate with eService providers or ICT companies (such as Google or Microsoft) to develop the latest user-friendly interfaces to support customer control. It is actually a specialisation of service provision: eBankers offer the latest banking service, and ICT partners develop and maintain the latest interface and software for customers' self-service and control of navigation to manage their personal finances.

Intelligent Agent Technologies

Another promising development to increase value of eService to demanding customers is to embed intelligent agent technologies in eService. These software agents offer assistance to customers in relation to some difficult or time consuming tasks, such as searching for financial information and analysing financial data to facilitate investment.

Interactivity

In the structural model, interactivity was also confirmed as a construct that contributes positively to dependency and satisfaction. Although it is also the nature of Internet communication, it has the weakest total standardised effects on those endogenous constructs. It might be argued that interactivity is now becoming a "hygiene factor" affecting dependency and satisfaction. Because of structural factors (such as a powerful broadband network and effective software) and behavioural factors (such as customers' skilfulness and impatience), interactivity is the hygiene factor that will cause customer dissatisfaction if it is missing, but not necessarily contribute to satisfaction if it is improved.

In fact, the eBanking service in Hong Kong has already reached a very high degree of interactivity, especially in the aspect of responsiveness. In order to be competitive, eBankers are working hard to improve the interactivity of the eBanking

service in terms of the hardware, software and human aspects.

Personalisation by Customers

To improve interactivity, the degree of personalisation and two-way communication can be further developed. Personalisation means, for example, the offering of a tailor-made account page to each individual customer. Inside the customers' account page, content has to be personalised according to their banking needs, interest/preference and financial portfolio. Such personalisation can be done by the banks by using existing customer data or can be modified by customers according to their personal determination.

Website Recommendation System

Personalisation through website recommendation systems is an alternative to enhance the interactivity of the eBanking service. These systems present customer relevant information items, such as web pages, news, reports, interactive maps, that are likely to be of interest to customers. It is an effective way to improve the eService encounter.

Internet Communications

To achieve two-way communication, a human element, instead of hardware or software, can be incorporated into eService. Some leading banks in Hong Kong, such as HSBC, are planning to introduce a real-time online chat service to eBanking

customers to solve banking and encounter problems instantly.

Alternatively, the free internet telephony service Skype can also be used. It offers customers who are Skype users the convenience to video call the eBanking service centre instantly.

Blogs and Virtual Customer Communities

Corporate blogging is becoming more popular. A corporate blog is becoming an important channel to communicate directly with customers. It is also a business intelligence tool to collect customer opinions regarding services and a marketing tool for new services. The use of blogs as an interactive communication tool also fits in eBanking customers' lifestyles.

Alternatively, eBankers can develop virtual communities or social networks in order to maintain constant dialogue with eBanking customers. By using these communities, customers can share positive or negative experiences, post suggestions, or co-develop eBanking services with eBankers. These online communications have already been adopted by companies, such as Bang & Olufsen, Dell, Microsoft and Virgin Atlantic, or non-profit organisations (Strauss and Frost, 2009; Rauch, 2007; Waters, Burnett, Lamme and Lucas, 2009; Berman, Abraham, Battino, Shipnuck and Neus, 2007; Nambiisan, 2002). Such online communication is not only interactive, but also an involving interaction between customers and service providers.

eService Dependency, eService Encounter Satisfaction and Overall Satisfaction

According to the structural model, interactivity, control and involvement contribute to customers' eService dependency and eService encounter satisfaction. eService dependency represents the high tendency of customers to use the eBanking service option for their goal fulfilment. As the eBanking service option offers benefits, such as cost savings and efficient advantages, over the other banking options, eBankers have a very strong motivation to develop customers' eService dependency on eBanking. To achieve this, eBankers have to create a more interactive, controlled and involving experience for customers in the interaction process via the eBanking platform. Similarly, a more interactive, controlled and involving experience also contributes to eService encounter satisfaction.

Consequently, dependency and encounter satisfaction contribute to overall satisfaction with the service providers. It is obvious that customer satisfaction, no matter whether at service-encounter level or corporate level, is the prime objective of the service business. Once a high level of overall satisfaction at the corporate level is achieved, customer loyalty will be the outcome.

To conclude, eBankers have to develop a more interactive, controlled and involving experience of eBanking for eBanking customers. Such a positive online interaction experience will benefit the principal bank at both the service-encounter

level and the corporate level.

Limitations

Although the research has successfully addressed the research model with great effort, the current research is not without limitations.

One limitation relates to the data collection method. The findings of the research are based on a survey of customers by telephone. The measures of eBanking interaction experience are based on their perceptions rather than actual behaviour. In spite of serving as useful proxies, these subjective perceptions are subject to bias and judgement errors. Thus the use of objective data might improve the quality of the research.

The Hong Kong context of the research places limitations on the generalisability of the findings to eBanking or eService in other contexts. Nonetheless, as Hong Kong is an international financial centre with world-class banks offering eBanking service, the current research does enhance the understanding of the contribution of eBanking service to customer satisfaction to a certain extent. The same research instruments can be used in other contexts to further validate the findings and model in the current research.

The theoretical framework and model was developed based on the eBanking service. Thus its application and explanatory capability might be limited in the

eBanking context. Further research in different eService contexts might help to refine the current framework and model.

Implications for Future Research

The findings of the current research have some implications for researchers in Internet marketing, eService marketing, eBanking, customer satisfaction and loyalty.

Many opportunities exist to further investigate the impacts of interactivity, control and involvement in the eService context. Some of the opportunities come as a result of limitations with the current research, and others are suggested by the findings in the research itself.

Some opportunities are attributed to the ubiquity of the Internet as a powerful interaction platform. Future research should look at two general directions. The first direction should seek a better understanding of the impacts of interactivity, control and involvement on endogenous constructs included in the current research and endogenous constructs beyond the current research. The second direction should investigate how generalisable the findings of the current research might be for the general population and other types of eService. Along with these future research directions, refinement and examination of constructs in reliability and construct validity should be further pursued.

Extending the eService Model

Within the existing eService model, further research might be conducted to further understand the effects of interactivity, control and involvement on eService dependency and eService encounter satisfaction, and further on overall satisfaction and loyalty. To fully understand the impacts of interactivity, control and involvement, it is necessary to extend the model to address various properties of these constructs. Although these constructs are well-researched in the traditional marketing and communication contexts, they are relatively new in the eService and eMarketing contexts. Thus, the attributes identified in the current eService research are very limited. As they encompass multiple attributes, further research is necessary in order to develop a more comprehensive understanding of these constructs in the contexts of eService, eMarketing and Internet communication.

Moreover, it is suggested that more meaningful findings can be obtained by examining other Internet interaction/communication and service constructs with this model. It appears that interactivity, control and involvement might have impacts on a wide variety of marketing and communication outcomes in the eService context, in addition to those identified in the current research. A thorough investigation of the relationships among these constructs would provide a full and complete picture regarding the impacts of interactivity, control and involvement in eService and

Internet communication.

Generalising the eService Model

Future research should also test the generalisability of the model in the current research. Due to the choice of eBanking service and its current customers/users as the research domain, the external validity of the findings is limited. Future research should target subjects from the general public by randomly sampling eService users. Sample size should also be greatly increased. Such random sampling of various eService customers would then greatly increase the generalisability of the research. Thus the reliability and validity of the findings would be further improved.

Measurement Development and Validation

Further development and validation of measures for constructs should be pursued in future research. As discussed in the previous section, interactivity, control and involvement are multifaceted constructs. The current research focuses only on a very narrow part of them. Developing measures for these constructs to address their multifaceted nature is an important and challenging topic by itself. Such research would provide validated measures for them that could be used by future research in marketing and Internet communication.

Further development and validation of measures are also needed for other

constructs in the model, including eService dependency and eService encounter satisfaction. As eService dependency and its measures are newly developed, refining these measures would increase the reliability and validity of the measurement model, resulting in higher power in the research findings. Although service encounter satisfaction and its measures are well developed in marketing, its application in eService also requires further refinement to enhance its reliability and validity. Furthermore, if the existing research model is extended to include more constructs as suggested earlier, substantial development and validation of measures are necessary.

To conclude, there are a number of issues regarding the impacts of interactivity, control and involvement in eService and Internet communication that have not been investigated in the current research. The effort in this research represents only a small part of the work. To understand the whole picture of eService, Internet communication and customer satisfaction, more research is required.

Conclusion

This research presents significant progress in understanding eService and Internet communication, and their impact on customer satisfaction and loyalty.

It aims to investigate the effects of interactivity, control and involvement on eService dependency and eService encounter satisfaction, and on overall satisfaction and loyalty. Their effects on the respective constructs were found to be significant

and positive. The findings are encouraging, and they provide theoretical and practical insights into the benefits of interactivity, control and involvement during Internet communication in the eService context.

Based on the findings, practical suggestions are made to eBankers in order to offer a more interactive, controlled and involving experience to eBanking customers. From the academic perspective, the research contributes to theory-building in eService and Internet communication. It also expands the knowledge base of eService and Internet communication to accommodate the increasingly important area of online customer behaviour and online relationship management. It becomes the foundation for further research in these aspects.

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APPENDIX A

eBANKING IN HONG KONG: THE BACKGROUND

Introduction

This appendix serves as the background information for the current research. It describes and analyses eBanking development and its impact on financial institutions and customers in Hong Kong. It also covers the eBanking environment in Hong Kong, including eBanking users' behaviour and characteristics.

The Internet is emerging as an efficient and effective communication medium to maintain close interaction between service providers and customers, especially in the financial services sector. Both parties gain benefits. By reviewing the development of banking services, it can be realised that the role of information and communication technology (ITC) is becoming more and more important. All these facts justify the value of the current research, which aims to study the customer psychology of using eBanking in general, and specifically how the Internet attributes contribute to eBanking service encounter satisfaction and overall bank satisfaction.

Key Issues of Banking Service

According to the Hong Kong Association of Bankers, the operation of the banking systems meets the needs of all its users by providing management of both monetary value and information about monetary value. Customers need financial services which can measure, store, transfer, control, enhance, preserve, protect, exchange, sell or increase monetary value. The functions performed by the banks to satisfy the needs of consumers can be divided into six all-inclusive categories:

- Information
- Advice
- Transactions
- Lending
- Asset creation
- Risk mitigation

Traditionally, the banking business has been predominantly branch-focused in performing the above banking functions. The model of face-to-face interaction offers banks a customer service and marketing opportunity every time a customer visits the bank branch, with the goal to foster satisfaction and loyalty in the hearts and minds of customers. However, the focus of consumer-bank interaction has shifted significantly in recent years: the management of monetary value and the performance

of banking functions can now be done on eBanking platforms.

Since 1998, the focus of banking service development has been on using the Internet as a means to communicate with customers and to deliver services. The Internet is particularly attractive to financial services institutions because of its potential to integrate content from various sources, along with data about account information and transaction execution. Currently, Internet-based interactions, like those in the branch, integrate customer service, information, consultation, and transaction execution. However, unlike those in the branch, Internet-based interactions impose lower costs, minimal customer service personnel and geographical reach.

This following section covers the trends and strategies of the adoption of the Internet as a medium in customer communication and retail financial services.

Trends of Financial Services

Business is always in a state of flux as social, industrial and competitive factors change the way enterprises interact with customers. Five business trends — globalisation, consolidation, diversification of consumer assets, disintermediation and automation — are changing the ways that financial institutions compete with each other for customers, market share and profit. Globalisation and automation are discussed in more detail here, as they are directly related to the current research.

Globalisation

The trend toward globalisation is well illustrated by frequent acquisition activities in the financial sector. Banks such as HSBC, Standard Chartered Bank and Citibank are developing a global presence by acquisition and paving the way for a banking infrastructure unconstrained by geography. The emergence of the Internet as a service medium for retail financial services has made globalisation an even more seductive lure for some of the more aggressive financial institutions. The theory behind this is that the Internet, as a worldwide public network, essentially makes any business with an Internet presence accessible to any customer with Internet access, regardless of the physical distance between them. Together with the deregulation and standardisation of banking practice, any bank account in any bank in the world will soon be Internet accessible from any PC device.

This concept of globalised financial services carries with it the enormous opportunity of growing market share and the enormous threat of intensified competition, as banks are competing not only with their geographic peers but also with every Internet-enabled bank around the world.

Automation

ATMs were introduced in the early 1970s, followed by telephone banking, PC home banking and now eBanking. Developing remote access to banking services came about as part of an effort to automate repeatable transactions which cause traffic in the branch and cost the bank money. The adoption of ATMs and telephone banking actually paved the way for the introduction of eBanking. In the automation process in the eBanking era, customers serve themselves with an increasing degree of control and involvement over the encountering process with the eBanking site.

In order to cut costs from branch transactions, some banks are even encouraging their customers to shift to eBanking, by offering financial incentives. However, automation, self-service and remote access all lead to a decrease of direct marketing opportunities that occur in the bank branch. As a result, although consumers have not given up the branch in exchange for remote access, they do use it less often, resulting in fewer opportunities for the bank to differentiate itself through advice, information and personalised customer service.

The collective result of these trends has been heightened competition between banks and non-banks as they fight for the same consumer money and assets. Because of the multitude of choices available to customers, banks are seeing increased client attrition rates, as customers are losing loyalty and shifting to competitors offering

better value. These factors are pushing banks to formulate a more aggressive service strategy in order to attract and retain customers. From a strategic perspective, bankers have to further enhance customer satisfaction and loyalty.

Thus, while offering eBanking service, bankers have to face the same fundamental problems at the same time: how to keep a close relationship with customers even on the eBanking platform, how to ensure their satisfaction during the encountering process with eBanking, and how to make sure that service encounter satisfaction contributes to the overall satisfaction and loyalty with the principal bank. The current research looks at these questions.

Consumer Trends

While banks are dealing with the changing worldwide banking environment with increasing competitive pressure, consumers are shaping their new format of relationship with banks, with the support of technology.

Remote Access

Although it took consumers more than 10 years to adopt the ATM, ATMs paved the way for consumers to look to remote channels for execution of routine, easily automated financial transactions. The subsequent introduction of telephone banking to access account information, customer service and product acquisition has resulted in faster adoption rates. The impact of remote access has been that more

consumers, especially those in the 18 to 34 and 35 to 50 age ranges, are becoming more self-sufficient, using the branch for non-routine transactions or those that require assistance from branch personnel, while relying on remote channels for general account maintenance. However, customers are isolated in this situation, and their satisfaction and loyalty might be negatively affected.

Adoption of Home PC

According to the Census and Statistics Department (2008), the PC penetration rate reached 74.6%, and 98.3% of these computers are broadband-connected. About 70% of the population aged 10 or above have used PCs. Collectively, these PC-enabled households represent a growing market of technologically savvy consumers who feel comfortable using computer technology for applications, including eBanking.

Internet Penetration

Statistics from the Census and Statistics Department (2008) also show 70.9% penetration of the Internet by households. The major purposes of using the Internet are information searching, communication/interaction, and online shopping. The Internet is used more than once a week by 92.7% of Internet users. These statistics show that the PC and Internet have already become an important means for communication and business activities used by a very broad spectrum of people in

Hong Kong.

Knowledgeable and Demanding Consumers

The impact of the Internet as an information source has created an opportunity for banks to communicate with and market to their customers and prospects through an enormous electronic brochure. The challenge is that it also gives bank customers access to information from competing banks. More importantly, the Internet gives consumers access to information that was once proprietary to financial institutions. The mysteries of lending and investing funds have suddenly been demystified by a multitude of periodicals and financial publications that comprehensively explain these concepts in their free online articles. In the Internet world, information that was once the property of bankers has become a commodity, easily found free of charge on any one of thousands of financial-services-focused websites. Consumers are becoming more knowledgeable about banking and investment. Their expectation of eBanking service will then be very high.

Multi-shop Shoppers

Banks are also trying to examine their customer base to determine the percentage of customers that are “one-stop shoppers”, i.e., consumers who seek to use one bank for all of their financial needs, from deposit accounts to mutual funds to credit cards. Most consumers have more than one financial relationship, and many

have four to eight separate financial institutional relationships, each of which owns a small slice of the consumer's "wallet share". This trend is becoming more noticeable in Hong Kong as the boundaries of banking, brokerage and insurance have become increasingly blurred since deregulation. Regulations are loosening while ongoing reform of the banking system is continuing, so there is little ability for one financial institution to become a true "one-stop shop" in today's market environment.

Collectively, the five consumer trends have fostered a new generation of financial services consumers that are more self-sufficient than previous generations and less dependent on the bank to provide direction, education and advice. The growing population of educated and knowledgeable consumers is forcing banks to identify new ways to add value or to risk losing them as customers. The Internet and eBanking represent possible solutions to reinvent a closer and more interdependent relationship with this emerging demographic.

Technological Evolution of Retail Banking Services in Hong Kong

In line with these trends, banks are constantly improving their service and operational efficiency by using ICT. This section describes and explains how ICT contributes to customer interaction and satisfaction from an historical perspective.

Automatic Teller Machine

In 1970s, the Electronic Fund Transfer (EFT) system was introduced in Hong

Kong. The EFT system helps financial institutions process financial data and transfer funds electronically. Such technological innovation enabled the banks to offer computerised and self-service electronic banking services – ATM and Electronic Funds Transfer at Point of Sale (EFTPOS) – in Hong Kong.

ATMs were first introduced in Hong Kong in 1979 by the Standard Chartered Bank. ATMs provide basic banking services on a 24-hour basis. By using an ATM card together with a personal identification number (PIN), customers can deposit or withdraw cash, transfer funds between accounts, check the account balance, pay bills and request chequebooks and account statements. Transactions are electronically recorded instantaneously and do not need the involvement of a human teller. Their introduction also marks the starting point of self-service of banking services.

According to the Hong Kong Association of Banks, there were over 2,400 ATMs serving the general public in 2007, which represents a penetration of 35 ATMs per 100,000 citizens. Such a high penetration rate illustrates that ATMs are widely accepted by people in Hong Kong.

The leading bank in Hong Kong, the Hongkong and Shanghai Banking Corporation Limited (HSBC), introduced ATM services to Hong Kong in 1980. The acronym ETC (Electronic Teller Card) is used to mean “easy flow of money” in Chinese. As HSBC’s ATM network was growing rapidly across several countries to

support globalised cash transactions, the network was formally named "Global Access" in February 1992. Global Access is now a heavily utilised ATM system in the world.

Telephone Banking

Intensification of competition between banks led to the development of innovative and instant service for a close customer relationship. In 1982, Chase Manhattan Bank in Hong Kong started to provide to the general public with a home-based banking service called "Telephone Banking". By linking the bank's computer system with the telephone line, customers were able to obtain personal banking services by simply dialling the bank's phone number anywhere, anytime.

With telephone banking, customers can easily access a bank's system to handle their accounts via telephone. Thus it is a convenient channel and it supplements the insufficiency of ATMs. Customers can check their account balance, transfer money, trade stock and foreign currency and manage credit card accounts. If they have any enquiries or problems, they can directly access the customer service personnel by telephone.

However, using telephone banking is time-consuming, as customers usually have to press several keys and follow many steps in order to access the services they want. They also have to wait for customer service personnel during busy hours. In

addition, customers can only handle money transactions of their accounts; if they want to withdraw or deposit money, they still need to go to a branch or use an ATM.

Telephone banking is very successful in Hong Kong because it is convenient and the scope of services provided is almost the same as that of the bank branches. Moreover, the high penetration rate of telephones – 100.3% for fixed line telephones and 161.5% of mobile phones in 2008 – has also contributed to the popularity of telephone banking. Telephone banking is currently an essential component of the service portfolio of retail banks in Hong Kong.

Home Banking

The success of telephone banking paved the way for home banking. Home banking enables customers to their access bank accounts and to conduct transactions via PCs. To use home banking, a personal computer, a modem and a telephone line are required. Specific banking application software has to be installed in advance in order to perform banking functions and transactions.

In 1985, HSBC and Hang Seng Bank became the pioneers of home banking service in Hong Kong. HSBC's "Hexagon" targets corporate customers who hold accounts to conduct frequent transactions. In 1996, Citibank in Hong Kong used its own dial-up network to offer direct access banking service via customers' PCs. Later on, the Bank of East Asia, the Standard Chartered Bank and other banks started

offering similar home banking services.

eBanking

It is believed that PC home banking was the forerunner of eBanking. Different from home banking, eBanking uses the Internet, a globalised network of computer networks, to connect to the banking system of a specific bank. After going through the security measures, customers can access their bank accounts and obtain banking services via the Internet with a Web browser. However, for home banking, proprietary software has to be installed in advance to a personal computer in order to access a specific banking system via the telephone line.

In 1999, there were a number of first movers offering eBanking services, namely, CFB Web Banking from Chekiang First Bank, Net Banking from Wing Lung Bank, CitiDirect from Citibank N.A., Cyberbanking from the Bank of East Asia, and eBanking from the Dah Sing Bank. In the middle of 2000, the market leader in Hong Kong, HSBC, launched its Internet Banking services. In 2009, in the World's Best Internet Banks Competition for Asia, HSBC won top awards for its consumer Internet banking in various Asian countries, including Hong Kong.

For these first movers, eBanking was primarily used as a publishing medium. They used the eBanking site as an electronic "brochure" to publish information about their bank, their products, branch locations, business hours, ATM locations, call

centre numbers, frequently asked questions, marketing information, and any other content that might be useful to current customers or prospects. More sophisticated electronic brochures might include some opportunity for interactivity, such as financial calculators with which the customer can experiment for estimating loan pricing or email the bank with a question or a request for information. Even with these interactive components, however, the eBanking site is still primarily content-driven, providing information independent of the consumer's relationship with the bank.

A bank's Internet presence transforms from "brochureware" status to real eBanking status once the bank goes through a technology integration effort to enable the customer to access information about his or her specific account relationships. As improvement continues, eBanking is becoming the virtual contact point between bank and customers for communication and comprehensive services. The functionality of eBanking is discussed in the following section.

To summarise, banking services, from traditional "bricks and mortar" to eBanking, are undergoing continuous evolution with the support of ICT. Historically, banks used information technology to process cheques (item processing), to drive ATM machines (transaction processing), and to produce reports (management information systems). In the past, computer systems ran in the back office and were

isolated from customers. Today, websites, electronic mail, electronic bill presentment and payment systems are important ways for banks to reach their customers. The traditional back office supportive function of computers has been transformed into a comprehensive network that interfaces directly with customers, with comprehensive communication and transaction capabilities. The Internet has become very important in the customer-bank communication process.

As a result of the widespread growth of the Internet, customers can use it anywhere in the world to access a bank's network and communicate with the bank. The Internet has made banking products and services available to more customers and eliminated geographic and proprietary systems barriers. Because of an expanded market, banks also may have more opportunities to expand or to develop products and service offerings to acquire more customers. Optimistically speaking, the Internet enables close communication between customers and service providers, and it fosters a close relationship as a consequence.

eBanking Services

According to the Information Systems Audit and Control Association (2003), eBanking activities can be classified into the following three types:

- Informational, which is the basic level of eBanking by displaying the bank's marketing information to satisfy the "search for information" need

- Communicative, which represents the bank-customer communication in various forms by using the eBanking platform
- Transactional, which represents the transaction activities conducted via the eBanking platform.

Such a classification is generic and easy to understand. However, as eBanking services are getting more diversified and complicated, this generic classification might not be sufficient to present a comprehensive picture of eBanking services.

eBanking Services in Hong Kong

To obtain a clear understanding of eBanking services in Hong Kong, it is important to know what financial services are being offered via the eBanking platform by banks in Hong Kong. According to the Hong Kong Association of Banks, there were 146 licensed banks in Hong Kong as of May 2009. There are 23 banks offering retail banking services, and 20 of the 23 offer eBanking services to the general public. Table A.1 lists these 20 banks. Their eBanking services are classified into eight categories:

- Account information, e.g., eStatement and eAdvice, real-time account balance and transactions
- Banking services, e.g., transfers (to self-named accounts and to registered accounts), time deposits, foreign currency exchange, account opening,

chequebook ordering, PIN request and email communication

- Payment services, e.g., transfers (to non-registered accounts) and bill payment
- Local securities services, e.g., stock trading, stock monthly investment plan and IPO
- Investment services, e.g., investment portfolio overview, bonds, certificates of deposit, unit trusts and gold trading
- Credit services, e.g., credit card application, personal loan application and application of an increase in credit card limit
- Insurance services, e.g., travel insurance, home insurance, fire insurance, accident insurance, hospital insurance and life insurance
- Personal setting, e.g., eAlert service registration, Autopay set-up and modification, and personal information update.

Accessing the eBanking site of each of these banks shows that eight banks – the Bank of East Asia, China Construction Bank (Asia), Citibank, Citic Ka Wah Bank, Hang Seng Bank, HSBC Limited, Industrial and Commercial Bank of China (Asia) and Wing Lung Bank – offer all eight categories of eBanking services. Four others – the Bank of China (Hong Kong), Dah Sing Bank, DBS Bank (Hong Kong) and Fubon Bank (Hong Kong) – offer all services, except insurance services. Two more – Standard Chartered Bank and Wing Hang Bank – also offer all services

except investment services.

The other six banks – Chiyu Banking Corporation, Chong Hing Bank, Mevas Bank, Nanyang Commercial Bank, Public Bank (Hong Kong), Shanghai Commercial Bank – offer only basic banking services and limited advanced services.

Two banks – Standard Bank Asia and Tai Sang Bank – have no eBanking services available, and the banks' websites serve as an electronic brochure. Lastly, Tai Yau Bank has no website available for access. They are not listed in the table.

From the above analysis, we can see that 61% (14 out of 23) of retail banks in Hong Kong offer comprehensive retail banking services via eBanking platforms. Such a situation also reflects the fact that eBanking has become an essential component of the banking service portfolio to maintain banks' competitiveness and attractiveness to customers.

Table A.1 eBanking Services in Hong Kong

Name of Bank	eBanking Services							
	Account Information	Banking Services	Payment Services	Local Securities Services	Investment Services	Credit Services	Insurance Services	Personal Settings
Bank of China (Hong Kong) Limited	√	√	√	√	√	√		√
Bank of East Asia, Limited	√	√	√	√	√	√	√	√
China Construction Bank (Asia) Corporation Limited	√	√	√	√	√	√	√	√
Chiyu Banking Corporation Limited	√	√			√			√
Chong Hing Bank Limited	√			√				√
Citibank (Hong Kong) Limited	√	√	√	√	√	√	√	√
Citic Ka Wah Bank Limited	√	√	√	√	√	√	√	√
Dah Sing Bank Limited	√	√	√	√	√	√		√
DBS Bank (Hong Kong) Limited	√	√	√	√	√	√		√
Fubon Bank (Hong Kong) Limited	√	√	√	√	√	√		√
Hang Seng Bank, Limited	√	√	√	√	√	√	√	√
Hongkong & Shanghai Banking Corporation Limited	√	√	√	√	√	√	√	√
Industrial and Commercial Bank of China (Asia) Limited	√	√	√	√	√	√	√	√
Mevas Bank Limited	√	√						√
Nanyang Commercial Bank, Limited	√	√			√			√
Public Bank (Hong Kong) Limited	√	√	√			√		√
Shanghai Commercial Bank Limited	√	√	√			√		√
Standard Chartered Bank (Hong Kong) Limited	√	√	√	√		√	√	√
Wing Hang Bank, Limited	√	√	√	√		√	√	√
Wing Lung Bank Limited	√	√	√	√	√	√	√	√

eBanking Service Offerings: A Strategic Perspective

The development of eBanking capabilities is a continuum, from the simplest balance enquiry to interactive communication and transactions. The previous section classified eBanking services simply from a functional perspective. However, it is more important to look at these eBanking service offerings from a strategic perspective. It can be generalised that three types of services – basic, advanced and new – are being offered. Each one has its strategic significance to eBanking itself and to the principal bank as a whole.

Basic Services to Maintain Market Presence

The basic services are the minimum service provision for an eBanking platform to operate. They are obligatory services to offer to eBanking customers:

- Registration: sign up for eBanking and password maintenance
- Account balance details: view various savings and current account details
- Transaction details: view the details and transaction history of their savings, current and credit card accounts
- Money transfer: transfer intrabank funds
- Information acquisition: download eStatements (an electronic version of the traditional mailed bank statement), service brochures, service terms and conditions

- Personal profile management: manage personal profiles, such as password update, account profile review and update.

All these services depend on internal bank data, and there is no movement of funds outside of the bank's systems. By definition, all banks offering eBanking have this level of functionality. This set of functions mirrors that of a basic ATM offering, minus the physical acceptance or disbursement of cash.

Advanced Services to Encourage Frequent Interaction

Banks are now putting more advanced services onto their eBanking platform in order to increase customer retention and enhance the eBanking usage rate:

- Account opening: open an integrated account online
- Cash management: transfer interbank funds, make a wire transfer, deal with foreign exchange and deposits, fixed deposit
- Bill payment management: pay bills online. Functions include payment enrolment, payee list management, payment scheduling and payment administration. Payment alerts and automation can also be set. Alerts are personalised email alert services that act as a payment reminder. Automatic payment provides customers with the option of allowing bills to be automatically paid if they fall below a customer-defined threshold amount for a particular biller.

- Loan and mortgage applications: make applications for personal loans, auto loans and mortgages. Customers might use an online financial calculator to determine mortgage and loan payments by entering the loan amount, term, and interest rate
- Loan management: view current balance for lines of credit, mortgages, auto loans, etc. Loan payments can be made by intrabank or interbank funds transfer
- Credit card application: apply for a credit card online
- Credit card account management: check balance and makes payments for credit card accounts. Customers can search, sort, categorise transactions, review transaction details of their current statement, and look ahead at charges that will be reflected on their next statement.
- Daily communication: electronic message creation, review and respond to correspondence between customers and bank personnel. This is a closed communication system, as messages from external sources are not supported.
- Investment management: manage stock and mutual fund transactions
- Instant stock quotes: get real-time stock price quotation, track the daily high, low or other specific time intervals set up by customers for a specified number of stocks.

- Information acquisition: access additional information, such as investment reports. Web links to relevant information sites are provided.

In the advanced services area, the movement of funds is not confined to the bank's own systems but moves outside, requiring integration with third-party payment processors or external networks. eBanking has also migrated from strict transaction execution to marketing and sales execution by integrating the ability to apply for various types of loans and credit cards. In addition, the product offerings have become more diversified, and the eBanking platform has been extended to access to non-deposit accounts, like loans or credit cards. Access to non-deposit accounts has become prevalent as eBanking service capabilities are enhanced in order to retain customers. Interactive capabilities, such as email communication and instant stock quote, have also been strengthened to improve communication and the relationship with customers.

New Services for Differentiation and Relationship Consolidation

In addition to these advanced services, new services are being added, as they are increasingly important in differentiating a bank from its competitors and in further consolidating the bank-customer relationship. Some leading banks are now starting to offer the following new services:

- Check imaging: online visual verification of cheques written, cleared, and deposited
- Alerts: alerts informing customers of transaction completion or approaching minimum or maximum thresholds of specific services, such as an alert sent once an account balance falls below a defined threshold. Customers predefine the conditions and method of notification they desire.
- Instant personal loan application and approval
- Financial management: facilitating of customers monitoring their financial status comprehensively by linking to customers' mutual funds or insurance accounts of other financial service providers
- International banking: support for several languages and currencies as well as international date, time and address conventions
- Online communication: automatic online videoconferencing or chat between the customer and the customer service personnel. Customers have real-time interaction with service personnel for banking services and consultation services.

It is clear that banks are now incorporating more advanced interactive functions into their eBanking platforms. For example, sophisticated customer information management systems and decision support tools have been developed to

support instant loan approval. Banks such as HSBC and Standard Chartered are now able to provide real-time notification or denial of loans via eBanking. Based on their personal profile available in the information systems, customers are grouped into different segments. Personalised communication and offers are then delivered to different segments.

eBanking Business Models

As banks can offer a variety of products and services via their eBanking platforms, a variety of business models can be adopted. The two most common approaches to develop the eBanking models used by financial institutions worldwide are:

- Traditional positioning: translation of the existing brick-and-mortar model to the Internet model.
- Emerging positioning: invention of a new entity only accessible on the Internet.

Due to banking regulations in Hong Kong, only the traditional positioning approach can be followed, and a one-stop eBanking model is then developed. This means that a bricks-and-mortar bank establishes a website offering banking services in order to develop and expand relationships with their customers. Such a model actually mirrors the bricks-and-mortar bank and markets products in all banking, brokerage and insurance arenas. This model shows a consistent face of a bank to its

customers, as they can access and purchase the same variety of products over the Internet or in a physical branch of the bank.

An alternative is to establish a branchless, Internet-only bank. By using the Internet, a bank can reinvent the roles it takes within the traditional value chain. Due to the geographic neutrality of the Internet, the Internet-only model facilitates the entrance into a new geographic area or a new product arena without the investment in a branch network. However, this model is not currently applicable in Hong Kong.

Market Leaders of eBanking in Hong Kong

According to the information from eBankers obtained during the expert interviews, HSBC, Hang Seng Bank, Bank of China, Bank of East Asia and Standard Chartered Bank are named the market leaders in the eBanking service in Hong Kong. In October 2010, HSBC has about 1.8 million eBanking customers. This is in line with its leadership position in Hong Kong in terms of the number of bank customers. HSBC has also received a number of awards in eBanking, including the best Internet Bank in the World's Best Internet Competition for Asia in 2009 and 2010 respectively. Hang Seng Bank is a subsidiary of HSBC, and it is believed that there is a synergy effect behind their eBanking operation. It is also the opinion of the eBankers that HSBC, Hang Seng Bank and Bank of East Asia now offer the most comprehensive eBanking services, while Bank of China and Standard Chartered

Bank also put great effort into developing and marketing their eBanking services.

eBanking Customers in Hong Kong

Although extensive secondary data research has been conducted, there is no accessible information available. With reference to limited market information and observation in the Hong Kong market, the following eBanking segmentation and targeting analysis has been prepared.

In general, there are two major segments of banking customers, high-value customers and lower-value customers. They have different psychographic backgrounds and expectations of banking service. With reference to Lund, Watson, Raposo and Maver's (2002) financial product purchase drivers, the characteristics of high-value customers and lower-values customers are defined and explained below.

High-value Customers

Banks aim to maximise the relationship with high-value customers, as they have a high tendency to be loyal and make regular encounters and transactions. The high-value customers consist of two segments, "information & advice seekers" and "convenience & speed seekers".

"Information & advice seekers" seek advice and counsel, and act regularly on recommendations from their bankers or advisors. They are knowledgeable because they access banking and investment information regularly. They are willing to build

and maintain a relationship with their banks, with the aim to maximise their return from assets and investments. They might be the best cross-selling opportunities for banks, and they keep a variety of financial products.

"Convenience & speed seekers" prefer the freedom and flexibility offered by eBanking. They tend to be loyal and to maintain a diverse portfolio from one financial institution because they are aware of the high switching costs of banking relationships. They value banks' cross-selling efforts, as they are looking for value for money offers from their banks.

Lower-value Customers

Banks have to keep the service cost low and meet the basic banking needs of lower-value customers. The lower-value segment is the price-minded customers who look for the lowest fees but the highest deposit rates. They are less inclined to develop long-term relationships with banks. They are difficult to retain because of their high propensity for seeking out the "best deal". For this segment, banks should offer services in a cost-effective manner via eBanking.

It is believed that eBanking is a service-encountering platform desirable and useful for both the high-value segment and the lower-value segment. It is realised that both segments are becoming very Internet- and eBanking-sufficient.

Customer Expectations

Customers nowadays are highly familiar with user-friendly ICT applications. They have an increasing preference for the use of electronic media to discover information, to communicate with others and acquire services from various eService providers. Their aspiration to involve and to control the interaction process by themselves in a highly participative interaction is the most influential trend noticed by eService providers.

Because they have become more capable, it is interesting to see that they show contradictory expectations of banking service. They demand more convenient, flexible and faster ways to do their banking. At the same time, they expect a more sophisticated mix of products tailored specifically to their financial needs.

Dratva (1995) suggests the five generic requirements for WWW-based home banking services:

- "Multi-banking capability" for transparent offers with easy-to-use services
- "Openness" for broadly accessible financial information
- "Standardisation" for guaranteeing comprehensive and versatile information service
- "Integration" to support three phases of electronic market transaction: information, negotiation/contracting and execution

- "User-friendly human interfaces" for efficient navigation within the large variety of services
- "Security" to protect users' interests.

To meet the expectation of eBanking customers, eBankers have to meet these minimum requirements.

Conclusion

The Internet is a unique medium which offers access to a vast target market, with the ability to interact with individual consumers one-to-one. It is also able to fulfil the entire consumer cycle of prospecting, distributing information, qualifying, transacting, cross-selling, two-way communication, building a relationship and finally satisfaction and loyalty building.

In the banking context, therefore, eBanking should then serve customers well and provide them with an "anytime, anywhere, anyhow one-stop services experience". The goal is customer intimacy for high-value customers and mass customisation for lower-value customers. eBanking service is attractive to both customers and bankers, as it is cost-efficient, has unlimited geographical reach, is effective in interaction and in relationship building.

APPENDIX B

INTERVIEW SCHEDULE FOR
EXPERT IN-DEPTH INTERVIEW WITH eBANKERS

The significance of eBanking to the eBanking service providers

1. What are the impacts of the Internet on the banking business?
2. What are the impacts of eBanking on the banking business?
3. What are the challenges of the Internet and eBanking services to your bank?
4. What are the opportunities offered by the Internet and eBanking services to your bank?
5. What are the impacts of the Internet and eBanking services on the operations of your bank?
6. What are the impacts of the Internet and eBanking services on the relationship between customers and the bank?

eBanking strategy

1. What are the eBanking strategies of your bank?
2. How can one attract one's customers to use and adopt eBanking services?
3. What services are being offered to your customers via eBanking? Which services are most important? Why?

The characteristics and behaviour of eBanking customers

1. What are the impacts of the Internet and eBanking services on the customers?
2. What are the responses of customers to eBanking services?
3. Why do the customers use the eBanking service?
4. What are the barriers for their adoption of eBanking services? How can one help them to overcome these barriers?
5. What are the demographic characteristics of your eBanking customers?
6. What are the behavioural characteristics of your eBanking customers while they are using eBanking?
7. What are the psychological characteristics of eBanking customers? How can one understand their psychology?
8. Do you think that the eBanking services match with the eBanking customers, in terms of their demographic, behavioural and psychological characteristics?
9. Do you think that there is an increasing tendency of customers' dependency on eBanking for interaction and transaction with your bank?

The factors contributing to the satisfaction with eBanking service

1. What do you think about the importance of customer satisfaction and loyalty to the banking business?
2. How do the eBanking services affect the encounter process between the customer and the bank?
3. Do you think that the customer is satisfied with the encounter process with your eBanking interaction?
4. What are the factors that contribute to their encounter satisfaction with the eBanking services?
5. How can one improve the encounter process between the customers and your eBanking system? Are there any typical examples and experiences you can share?
6. Does that kind of eBanking service dependency affect encounter satisfaction of eBanking usage? Are there any typical examples and experiences you can share?

The relationship between eService encounter satisfaction, overall satisfaction with the principal bank and loyalty to the principal bank

1. Do you think that eBanking service dependency affects the overall satisfaction with the bank on the whole?
2. Do you think that eBanking service dependency affects loyalty to the bank on the whole?
3. Do you think that the satisfaction with the eBanking encounter affects their overall satisfaction with your bank on the whole?
4. Do you think that the satisfaction with the eBanking encounter affects their loyalty to your bank on the whole?

Others

1. Do you have any other views, opinions or comments on eBanking services and eBanking customers that you would like to share?

APPENDIX C

QUESTIONNAIRE

Survey of eBanking Service

We are conducting research and would appreciate your voluntary participation. This questionnaire is designed to study your eBanking behaviour and your opinions about the eBanking service you are using and its associated bank. This questionnaire is targeted at current eBanking users. There are no right or wrong answers. Please answer all questions. All your responses will be kept strictly confidential.

Section 1: Usage of eBanking Service

1. Are you over 18?
   Yes ____ No ____
   If the answer is "No" in this question, please quit. Otherwise please go ahead.

2. Are you currently a user of eBanking service?
   Yes ____ No ____
   If the answer is "No" in this question, please quit. Otherwise please go ahead.

3. How long have you been using eBanking service?
   a) Less than 6 months
   b) More than 6 months and less than 1 year
   c) More than 1 year and less than 2 years
   d) More than 2 years and less than 3 years
   e) More than 3 years

4. Which bank's eBanking service do you use most frequently?
   a) HSBC
   b) Hang Seng Bank
   c) Standard Chartered Bank
   d) Bank of China
   e) DBS
   f) Bank of East Asia
   g) Other, please specify:_____

5. Is the eBanking service you use most frequently offered by your principal bank? (Principal bank means the bank you use most frequently.)

   Yes ____ No ____

   If the answer is "Yes", please go to Question 7.

   If the answer is "No", please go to Question 6.

6. Which is your principal bank?
   a) HSBC
   b) Hang Seng Bank
   c) Standard Chartered Bank
   d) Bank of China
   e) DBS
   f) Bank of East Asia
   g) Other, please specify: _____

7. On average, how many times do you log in to your eBanking account each week?

   _____

8. Is eBanking your primary way of acquiring banking services?

   Yes ____ No ____

   If the answer is "Yes", please go to Question 10.

   If the answer is "No", please go to Question 9.

9. What is your primary way of acquiring banking services?
   a) Bank's branch outlet
   b) Phone banking
   c) Automatic banking (e.g. ATM)
   d) Other, please specify _____

10. Is eBanking your primary way of interacting with your bank?

    Yes ____ No ____

    If the answer is "Yes", please go to Section 2.

    If the answer is "No", please go to Question 11.

11. What is your primary way of interacting with your bank?
    a) Bank's branch outlet
    b) Phone banking
    c) Automatic banking (e.g. ATM)
    d) Other, please specify _____

Section 2: Experience of Using eBanking

The following set of statements relates to your experience of using eBanking service. Please indicate the extent to which you agree or disagree with the statement by referring to your experience of using your most frequently used eBanking service and its associated bank. 1 represents strongly disagree and 5 represents strongly agree.

1. The eBanking site facilitates two-way communication between the bank and me.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

2. The eBanking site can be accessed quickly.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

3. I get instant responses from the eBanking site.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

4. The eBanking site offers me interactive communication.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

5. The eBanking site offers me personalised information that fits my specific needs.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

6. The eBanking site offers me personalised communication that fits my specific needs.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

7. I believe I am very skillful at using the eBanking service.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

8. I consider myself knowledgeable about good techniques for using the eBanking service.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

9. I can complete the banking tasks I plan to complete by using the eBanking service.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

10. I can complete banking tasks accurately by using the eBanking service.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

11. I can complete banking tasks quickly by using the eBanking service.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

12. I am interested in browsing the eBanking site.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

13. My experience of navigating the eBanking site is interesting.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

14. The eBanking site offers me a self-directed environment to navigate.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

15. The eBanking site offers me a free environment to conduct banking activities.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

16. eBanking is the most useful platform for me to make banking and financial decisions in my daily life.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

17. eBanking is the most useful platform for me to manage my bank account in my daily life.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

18. eBanking is the most useful platform for me to plan my personal finances in my daily life.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

19. I am satisfied with my encounter experience with the eBanking service.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

20. The eBanking service fulfills my banking needs.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

21. In general, I am happy with my eBanking experience.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

22. Overall, I am very satisfied with the bank with the eBanking service I am using.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

23. Overall, I am very satisfied with the service provided by the bank with the eBanking service I am using.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

24. I am happy with the overall service experience delivered by the bank with the eBanking service I am using.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

25. I would recommend the bank with the eBanking service to other people.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

26. I would continue to patronise the bank with the eBanking service, even if the service charges are increased moderately.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

27. My continued association with the bank with the eBanking service is important to me.
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

Section 3: General Information

1. How long have you been using a personal computer?
___Less than a year ___1-5 years ___6-10 years ___11 years or over

2. On average, how many hours per week do you spend browsing websites?

_____

3.

4. On average, how many transactions do you make by using eBanking in a week?

   _____

5. Your personal monthly income is about:
6. ___under 9,999 ___10,000-19,999 ___20,000-29,999 ___30,000-39,999 ___40,000-49,999 ___50,000-59,999 ___60,000-69,999 ___70,000-79,999 ___80,000-89,999 ___90,000 or over

7. Your age is: ___18-24 ___25-34 ___35-44 ___45-54 ___55-64 ___65 or over

8. Your education level is: ___Primary School ___Secondary School ___College ___University ___Graduate School or above ___Other

9. Your gender is: ___Male ___Female

Thank you for completing this survey.
Your support is greatly appreciated.

APPENDIX D

CONSTRUCTS, MEASUREMENT ITEMS AND SOURCES

Construct	Measurement Items	Sources
Interactivity (ITA)	• The eBanking site facilitates two-way communication between the bank and me. • The eBanking site can be accessed quickly. • I get instant responses from the eBanking site. • The eBanking site offers me interactive communication. • The eBanking site offers me personalised information that fits my specific needs. • The eBanking site offers me personalised communication that fits my specific needs.	Liu (2003)
Control (CNT)	• I believe I am very skillful at using the eBanking service. • I consider myself knowledgeable about good techniques for using the eBanking service. • I can complete the banking tasks I plan to complete by using the eBanking service. • I can complete banking tasks accurately by using the eBanking service. • I can complete banking tasks quickly by using the eBanking service.	Venkatesh and Davis (1996), Devaraj et al. (2002) and Novak et al. (2000)
Involvement (IVM)	• I am interested in browsing the eBanking site. • My experience of navigating the eBanking site is interesting. • The eBanking site offers me a self-directed environment to navigate. • The eBanking site offers me a free environment to conduct banking activities.	Webster et al. (1993), Ghani and Deshpande (1994) and Childers et al. (2001).

eService Dependency (EDP)	• eBanking is the most useful platform for me to make banking and financial decisions in my daily life. • eBanking is the most useful platform for me to manage my bank account in my daily life. • eBanking is the most useful platform for me to plan my personal finances in my daily life.	Patwardhan and Ramaprasad (2005), and Patwardhan and Yang (2003)
eService Encounter Satisfaction (ESAT)	• I am satisfied with my encounter experience with the eBanking service. • The eBanking service fulfills my banking needs. • In general, I am happy with my eBanking experience.	Keaveney and Parthasarathy (2001)
Overall Satisfaction with the Principal Bank (SAT)	• Overall, I am very satisfied with the bank with the eBanking service I am using. • Overall, I am very satisfied with the service provided by the bank with the eBanking service I am using. • I am happy with the overall service experience delivered by the bank with the eBanking service I am using.	Keaveney and Parthasarathy (2001), and Hu and Yang (2006)
Loyalty to the Principal Bank (LOY)	• I would recommend the bank with the eBanking service to other people. • I would continue to patronise the bank with the eBanking service, even if the service charges are increased moderately. • My continued association with the bank with the eBanking service is important to me.	Ganesh et al. (2000) and Sudhahar (2006)

APPENDIX E

MEDIATION ANALYSIS

Mediation Test for ITA → EDP → SAT (Status: Partial Mediation)

Independent \ Dependent	Overall Satisfaction	eService Dependency	Overall Satisfaction
Interactivity	0.51* (7.29)	0.21* (4.2)	
eService Dependency			0.49* (8.17)
F-value	53.08*	17.64*	66.69*
Sobel test			3.735*

Mediation Test for ITA → ESAT → SAT (Status: Partial Mediation)

Independent \ Dependent	Overall Satisfaction	eService Encounter Satisfaction	Overall Satisfaction
Interactivity	0.51* (7.29)	0.15** (3.00)	
eService Encounter Satisfaction			0.26* (4.33)
F-value	53.08*	9.00**	18.78*
Sobel test			2.47**

Mediation Test for ITA → EDP → LOY (Status: Complete Mediation)

Independent \ Dependent	Loyalty	eService Dependency	Loyalty
Interactivity	0.64* (9.14)	0.21* (4.20)	
eService Dependency			0.14 (1.75)
F-value	83.59*	17.64*	3.06
Sobel test			1.61

Mediation Test for ITA → ESAT → LOY (Status: Complete Mediation)

Independent \ Dependent	Loyalty	eService Encounter Satisfaction	Loyalty
Interactivity	0.64* (9.14)	0.15** (3.00)	
eService Encounter Satisfaction			0.03 (0.43)
F-value	83.59*	9.00**	0.18
Sobel test			0.43

Mediation Test for CNT → EDP → SAT (Status: Partial Mediation)

Independent \ Dependent	Overall Satisfaction	eService Dependency	Overall Satisfaction
Control	1.12* (14.00)	0.16* (3.20)	
eService Dependency			0.49* (8.17)
F-value	196.00*	10.24*	66.69*
Sobel test			2.98*

Mediation Test for CNT → ESAT → SAT (Status: Partial Mediation)

Independent \ Dependent	Overall Satisfaction	eService Encounter Satisfaction	Overall Satisfaction
Control	1.12* (14.00)	0.53* (8.83)	
eService Encounter Satisfaction			0.26* (4.33)
F-value	196.00*	78.03*	18.78*
Sobel test			3.89*

Mediation Test for CNT → EDP → LOY (Status: Complete Mediation)

Independent \ Dependent	Loyalty	eService Dependency	Loyalty
Control	1.12* (10.18)	0.16* (3.2)	
eService Dependency			0.14 (1.75)
F-value	103.67*	10.24*	3.06
Sobel test			1.54

Mediation Test for CNT → ESAT → LOY (Status: Complete Mediation)

Independent \ Dependent	Loyalty	eService Encounter Satisfaction	Loyalty
Control	1.12* (10.18)	0.53* (8.83)	
eService Encounter Satisfaction			0.03 (0.43)
F-value	103.67*	78.03*	0.18
Sobel test			0.43

Mediation Test for IVM → EDP → SAT (Status: Partial Mediation)

Independent \ Dependent	Overall Satisfaction	eService Dependency	Overall Satisfaction
Involvement	1.31* (16.38)	0.51* (7.29)	
eService Dependency			0.49* (8.17)
F-value	269.14*	53.08*	66.69*
Sobel test			5.44*

Mediation Test for IVM → ESAT → SAT (Status: Partial Mediation)

Independent \ Dependent	Overall Satisfaction	eService Encounter Satisfaction	Overall Satisfaction
Involvement	1.31* (16.38)	0.58* (7.25)	
eService Encounter Satisfaction			0.26* (4.33)
F-value	269.14*	52.56*	18.78*
Sobel test			3.72*

Mediation Test for IVM → EDP → LOY (Status: Partial Mediation)

Independent \ Dependent	Loyalty	eService Dependency	Loyalty
Involvement	0.99* (9.90)	0.51* (7.29)	
eService Dependency			0.15** (3.00)
F-value	98.01*	53.08*	9.00**
Sobel test			2.77*

Mediation Test for IVM → ESAT → LOY (Status: Complete Mediation)

Dependent / Independent	Loyalty	eService Encounter Satisfaction	Loyalty
Involvement	0.99* (9.90)	0.58* (7.25)	
eService Encounter Satisfaction			0.03 (0.43)
F-value	98.01*	52.56	0.18
Sobel test			0.43